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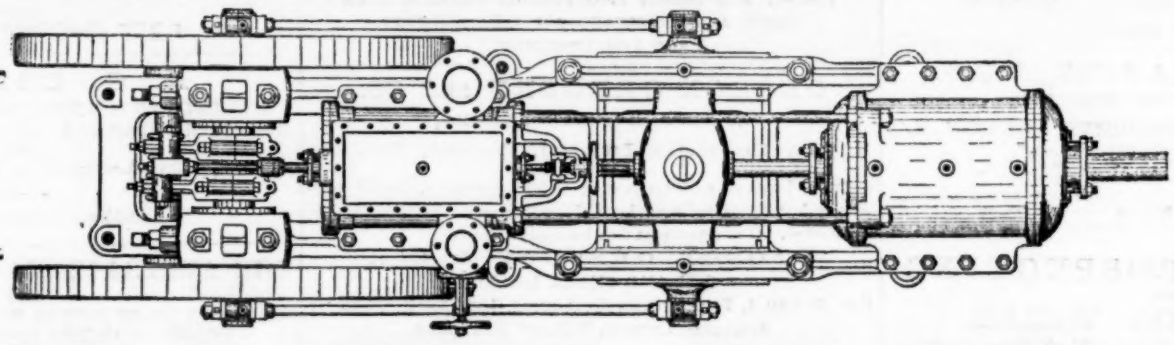

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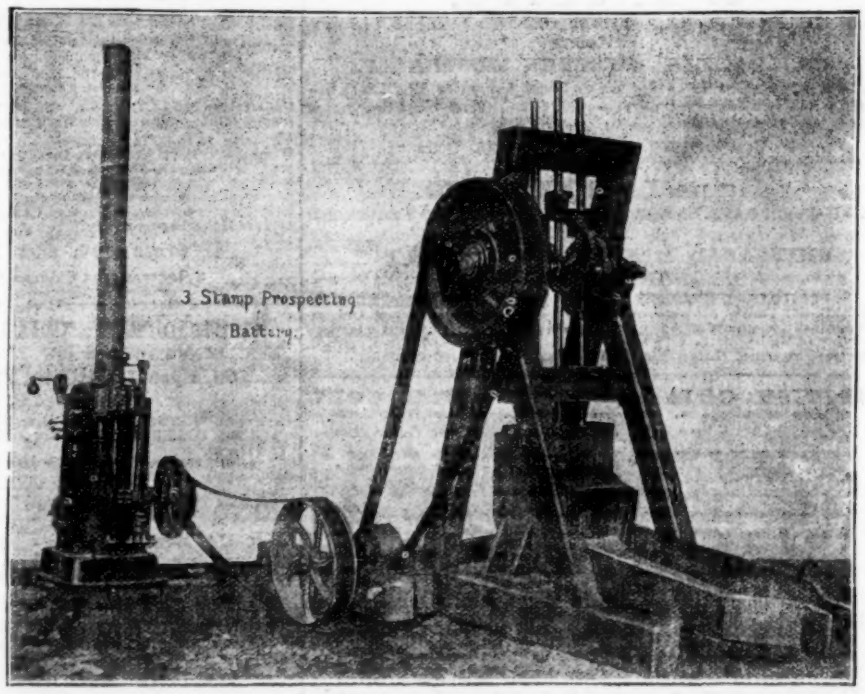

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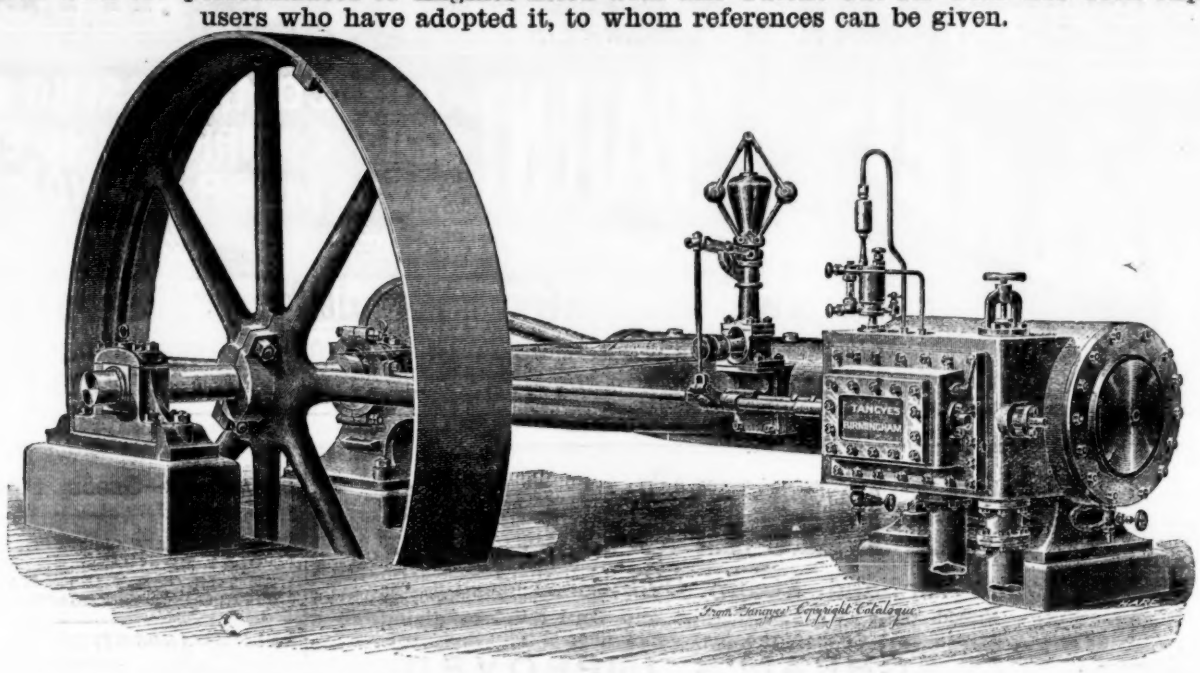

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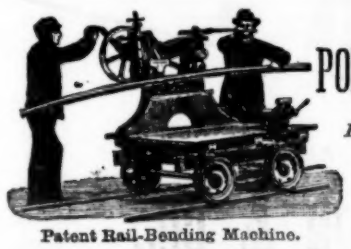

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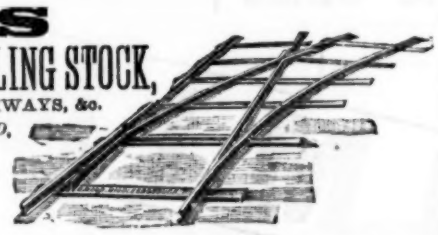

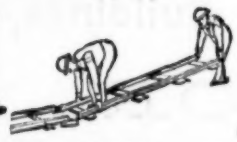

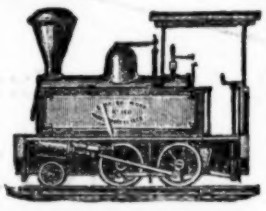

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WE have for a number of years been receiving numerous complaints from our Representatives and Agents that buyers have been deceived into purchasing Packings which are called "Frictionless," under the impression that they were buying our manufacture, or Packing of the same quality as the "Electric-Frictionless." To protect ourselves, and in the interest of our customers, we have registered the word **"KARMAL,"** and by this name only will Electric-Frictionless be known in future. The Packing will not be altered in the slightest degree, either in its manufacture or material.

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Applicable to all enclosed Fans

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upwards of 400 of the above now AT WORK indicating in the aggregate 150,000 Horse-Power

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THIS GEARING IS NOW EXTENSIVELY IN USE FOR HAULAGE PURPOSES.
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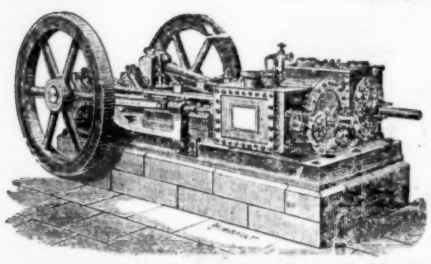
With Compound Air and Steam Cylinders,
Fitted with SCHRAM'S Inlet and Outlet Valves giving the greatest efficiency.



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2500 IN USE in all PARTS of the WORLD.
DIAMOND PROSPECTING DRILLS.
"OPTIMUS" COMPOUND ROCK DRILL.
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Telegrams—Green, Foundry, Aberystwyth.

SILVER MEDALS AWARDED AT THE ROYAL CORNWALL POLYTECHNIC, 1872 & 1876; GOLD MEDAL AWARDED AT THE GREAT INTERNATIONAL MINING EXHIBITION, CRYSTAL PALACE, 1890.

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Self-Acting or Automatic
Ore Dressing Machinery,
A Special Plant, on a reduced scale, has been erected at the Works by which samples of METALLIC ORES—up to Five Tons may be treated, and the commercial value determined, in this way the most suitable arrangement of Plant is ascertained, a considerable advantage to intending Purchasers of Crushing and Concentrating Plant.

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Light Lap-welded Wrought-iron and Steel Tubes
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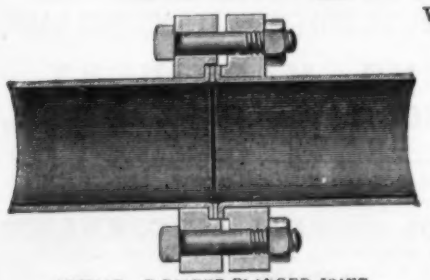
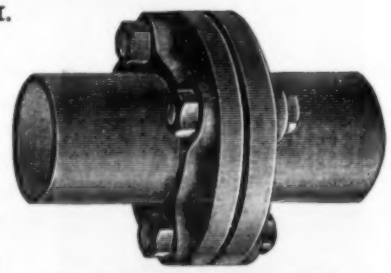
STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.



SECTION OF PATENT FLANGED JOINT



PLAN OF PATENT FLANGED JOINT.

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Patentees and Sole Makers of

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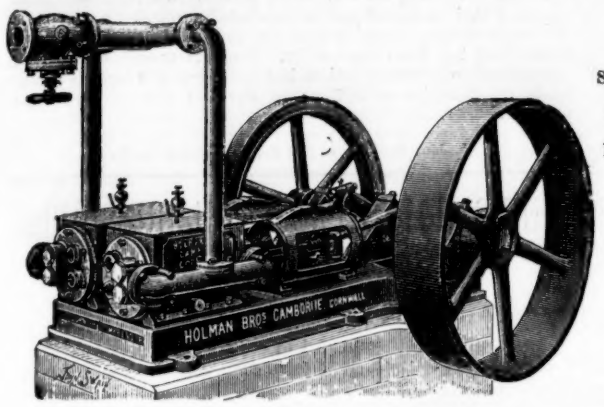
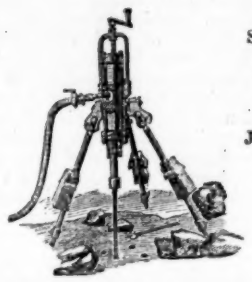


FIRST SILVER MEDAL, Highest Award, Mining Institute Contest, 1881.

Three Makers represented.



FIRST SILVER MEDAL Highest Award, Royal Cornwall Polytechnic Jubilee Exhibition Contest, 1882.

Five Makers represented.

AWARDED SILVER MEDAL INTERNATIONAL INVENTIONS EXHIBITION, 1885.

RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO** new Patent **CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until holing to the Shaft brought down from surface.

E timates for ROCK BORING PLANT and GENERAL MINING MACHINERY on Application.

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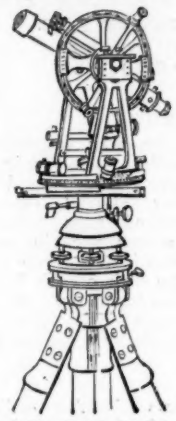
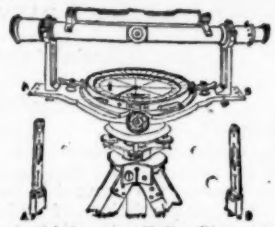
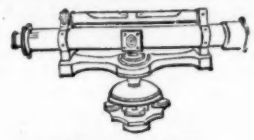


Transit Theodolite with Patent Hoffman Tripod Head, and Trough Compass.



Davis's Improved Hedley Dial, with Telescope and Sights Interchangeable and Patent Hoffman Tripod Head.



Dumpy Level with Hoffman Patent Tripod Head.

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SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMPS

SECTION (B) ELECTRICAL DEPARTMENT.

Gold Medal Awarded Mining Exhibition, 1890.

"THE ENGINEERING TELEGRAPH CODE USED."

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AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

CONCENTRATION.

The Clarkson-Stanfield Concentrator (Limited).

In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT ½ TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.

CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS

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The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

9402 Francis Edward Rainey, 101, St. Vincent Street, Glasgow.—An improved water tube boiler.—May 13

9418 Caddy and Co. and Leoline Edwards, 323, High Holborn, London.—Improvements in or relating to furnaces.—May 13

9425 Arthur Harry Roper Pulman and Frederic O'Connor Prince, 37, Carsitor Street, Chancery Lane, London.—Improvements in internal combustion engines.—May 13.

9444 Henry Marie Leblond and Jean Marie Joseph Adrien Cavide, 11, Southampton Buildings, Chancery Lane, London.—Improvements in and relating to water tube boilers.—May 13.

9449 John E. Hodgson, 31, High Holborn, London.—Improvements in fire-bars for steam boiler and other furnaces.—May 13.

9517 Alfred Blechynden, 55, Chancery Lane, London.—Improvements in tubulous steam boilers.—May 14.

9529 William Phillips Thompson, 6, Lord Street, Liverpool.—Improvements in or relating to obtaining more perfect combustion in furnaces and flues, and in apparatus therefor.—May 14.

9537 William Edwin Harris, 27, Southampton Buildings, Chancery Lane, London.—Improvements in sheet-iron heating furnaces.—May 14.

9580 Elijah Bailey Benham, 45, Southampton Buildings, Chancery Lane, London.—Improvements in multiple cylinder motors.—May 14.

9567 Jules Emmanuel Dery, 47, Southampton Buildings, Chancery Lane, London.—An improved automatic arrangement for the prevention of priming in steam engines.—May 14.

9573 John Percy Hall, Carville, Laurie Park Road, Sydenham, London.—Improved water-tube boiler.—May 15.

9588 Edward Makin, jun., 17, St. Ann's Square, Manchester.—Improvements in steam boilers.—May 15.

9654 Theodor Burmeister, 37, Chancery Lane, London.—Improvements in and relating to furnaces.—May 15.

9676 Joshua Entwisle, 5, John Dalton Street, Manchester.—Improvements in steam engines.—May 16

9710 Alfons Trassl and Joseph Trassl, 443, Strand, London.—Improvements in smoke consuming furnaces.—May 18.

9854 Zzophirin Lecaisne, 323, High Holborn, London.—An improved locomotive.—May 13.

SPECIFICATIONS PUBLISHED.

2306, Vautin, extracting metals from oxides, &c., 1894; 9697, Dales, steam, &c., engines, 1894; 9980, Conway and Underwood, steam boiler furnaces, 1894; 10, 23 Pitt, steam pumps; 12,223, Johnson, furnaces, 1894; 12,846, Hawthorn, water tube boilers, 1894; 1158, Weiland, rotary motors, 1895; 5512, Potter, composition for the antifriction of metals, 1895; 5539, Potter, composition for the antifriction of metals, 1895.

The above specifications published may be had of Messrs. Rayner and Co., 37, Chancery Lane, London, at 10d. each, including postage.

THE END OF THE CENTURY draws near, and somehow the fact impresses one, and makes one think. On the threshold, as it were, of the twentieth century, we pause and take a glance back over the years that are gone. How much has happened during this now dying century! What wonders have been given to the world! The power and use of steam, the electric telegraph—these and many others are the discoveries of the nineteenth century. But that which will cause the closing century to stand out above all that have gone before and all that are to come, is the fact that in its earlier half was discovered a priceless blessing to mankind—those universal remedies—Holloway's Pills and Ointment.

JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

Anglo-Africanda Company (Limited).—Registered by Burn and Berridge, 11, Old Broad Street, E.C., with a capital of £7000 in £1 shares. Object: To enter into an undetailed agreement, and to acquire, develop, and turn to account and deal with certain gold mining claims or properties in Africa, and to carry on business as miners and smelters generally. The directors are to be elected by the signatories. Remuneration to be fixed by the company.

Barberton Estates and Gold Mining Company (Limited).—Registered by Beaumont and Sim, 45, Gresham House, E.C., with a capital of £7 in £1 shares. Object: To acquire, develop, and turn to account freehold and other farms, mines, lands, &c., in Africa or elsewhere. Registered without Articles of Association.

British and South African Syndicate (Limited).—Registered by Tempier, Dowse, and Miller, 3, Pope's Head Alley, E.C., with a capital of £3030 in £1 shares. Object: To adopt a certain agreement, and to acquire, develop, and turn to account any gold mines, mining rights, &c., in Africa or elsewhere. Registered without Articles of Association. Registered office: 3, Pope's Head Alley, E.C.

Sultana Gold and Silver Mining Syndicate (Limited).—Registered 6th May. Capital £25,000, in £1 shares. Objects: To search for, prospect, examine, explore, develop, and work mines and ground supposed to contain minerals.

Wilpoortje Gold Mines (Limited).—Registered May 21, by Birchall; 85, Gracechurch Street, E.C., with a capital of £150,000 in £1 shares. Objects, To acquire, prospect, develop, and generally turn to account mines, mining, and water rights, properties, grants, leases, claims, concessions, lands, minerals, trading grants, buildings, machinery, or other real or personal property in Africa or elsewhere.

Golden Arrow Mine (Limited).—Registered May 22, by Harvey and Speed, 1, Clement's Inn, W.C. Capital £120,000, in £1 shares. Objects: To adopt and carry into effect an agreement made May 13 between J. D. Massey of the first part, and J. Mascorop (on behalf of this company) on the other part; to acquire mines, mining and water rights, grants, leases, claims, concessions and other properties situate at Broad Arrow, Coolgardie, West Australia; to develop and turn to account the same, and to carry on business as miners and smelters in all its branches.

Welsh United Collieries (Limited).—Registered by H. P. Bacher, 26, Bedford Row, W.C., with a capital of £30,000 in £10 shares (3000 preference). Object: To adopt and carry into effect an agreement expressed to be made between J. J. Bissicks, of the one part, and this company of the other part, for the acquisition by purchase of the business hitherto carried on at the Lantwit Merthyr Penrhiw and Woodfield Collieries, and to carry on the business of colliery proprietors, coke and patent fuel manufacturers, miners and smelters, engineers, ship-owners, tin-plate workers, &c.

Matabeleland Ancient Gold Reef (Limited).—Registered by J. B. Roberts, 73, Basinghall Street, E.C., with a capital of £30,000 in £1 shares. Object: To adopt and carry into effect an agreement expressed to be made between the Colonial Mines and Contract Corporation (Limited), and to acquire by purchase or otherwise certain mines, mining, water, and other rights, grants, leases, claims, concessions, and metalliferous land in the Belingwe district of the British South Africa's Company's territory, South Africa, and generally to carry on the business of a mining, milling, smelting, and metallurgical company in all its branches.

Oriental Gold Mining Company of India (Limited).—Registered by Lyne and Holman, 5 and 6, Great Winchester Street, E.C., with a capital of £137,500 in £1 shares. Object: To adopt and carry into effect an agreement expressed to be made between the Gold Fields of Mysore (Limited) of the one part and A. Wright, on behalf of this company, of the other part, and generally to acquire mines, mining and water rights, metalliferous lands, and other property, and to carry on the business of a mining, milling, smelting, and metallurgical company in all its branches.

Dolcoath Tin Mining Company.—This company, which has been constituted a Cost-book mine under the Stannaries of Cornwall and Devon, was registered on May 21 by Daniell and Thomas, Camborne, under the Companies Acts. The number of shares into which the mine is now divided is 4700, and £9 12s. 6d. has been called up and paid on each.

Lane Exploration Syndicate (Limited).—Registered by Hurrell and Mayo, 33, Cornhill, E.C., with a capital of £5,000 in £10 shares. Object: To acquire, improve, and generally turn to account lands in British Columbia or elsewhere. The directors are to be elected by the signatories. Qualification, 10 shares. Remuneration to be fixed by the company.

Mines Selection Company (Limited).—Registered by Ingle, Holmes, and Son, 20, Threadneedle Street, E.C., with a capital of £10,000 in £1 shares. Object: To adopt and carry into effect an agreement expressed to be made between the Mines Selection Syndicate (Limited) and the liquidator thereof of the one part and this company of the other part; to acquire freehold and other farms, mines, mining and water rights, grants, leases, claims, concessions, &c., in Africa or elsewhere, and to prospect for, open, work, explore, develop, and generally turn to account diamond, gold, silver, copper, and other mines.

Mount Rowe Consolidated Mining Company (Limited).—Registered by Edwards and Cohen, 3, Coleman Street, E.C., with a capital of £90,000 in £1 shares. Object: To acquire, by purchase or otherwise, manage, work, explore, prospect, develop, and generally turn to account mines, mining and water rights, grants, leases, claims, concessions, lands, &c., in Western Australia or elsewhere, and to carry on the business usually carried on by a mining, milling, smelting, and metallurgical company; also as quarry proprietors, timber growers, and merchants, &c.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

**** We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.*

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Coal, June 4 (*Carmarthen*).—For supply of about 2000 tons best well-screened large gas coal, to be delivered in trucks at Carmarthen Station between July, 1895, and June 30, 1896, in such quantities as may from time to time be required, for the Carmarthen Gas Company. Mr. B. A. Lewis, manager and secretary, Gasworks, Carmarthen.

Coal, June 6 (*Cheltenham*).—For the supply of gas coal for 12 months from August 1, for the Cheltenham Gaslight and Coke Company. Full particulars may be obtained from Mr. R. O. Paterson, engineer and manager, Gasworks, Cheltenham, to whom tenders must be delivered by June 6.

Reservoir, June 10 (*Holyhead*).—For the construction of an open reservoir of about 2½ acres in extent, with filters, for the Holyhead Waterworks Company. Plans and specifications may be seen at the office of the Company, 17, Stanley Street, Holyhead.

Earthwork, July 23 (*Cairo*).—Tenders will be received at the Secretariat of the Egyptian Railway Administration at Cairo up to July 23 at noon for earthwork, masonry, pitching, buildings, and other works for the line from Kafr-Zayat to Chabas. Payments are guaranteed, and will be made by the Commission of the Public Debt, Egypt. Conditions, general and technical, and description of works, may be seen during office hours on application to Lieutenant-Colonel Western, Broadway Chambers, Westminster, S.W.

Houses (*Whitburn Colliery*).—For building 43 houses, including the construction of streets and drains, at Whitburn Colliery. Plans and specifications can be seen on application to the Harton Coal Company (Limited), General Offices, Harton Colliery, South Shields.

AUSTRALASIAN VIEWS ON THE ORIGIN OF GOLD NUGGETS.

By FREDERICK DANVERS POWER, F.G.S.

(*Concluded from page* 621.)

The Chemical Theory.

SIR ALFRED R. C. SELWYN, formerly Government Geologist of Victoria, was, I believe, the originator of the theory that gold nuggets were found *in situ* among the materials composing alluvial deposits by the accumulation of gold deposited from meteoric waters percolating the drifts, which waters were in many cases strongly heated by basaltic eruptions.* Some persons fond of comparing inorganic matter with organic bodies speak of the "growth" of gold. This is an unfortunate expression, as the process of growth requires organs which minerals do not possess. That minerals increase in bulk by aggregation is true enough, but this is not growth.

The Solvent.

Naturally, the first thing is to look for a solvent capable of bringing gold into a favourable condition for future precipitation. At the outset we may as well acknowledge that up to date, notwithstanding several examinations, we have no actual chemical proof of the presence of gold in meteoric waters, if we except E. Soustadt's well-known experiments with seawater, when he discovered something less than 1 grain of gold per ton of water.† But, notwithstanding, we have very good reasons for believing that gold has, and does exist in solution, as we find it present in places where we cannot conceive of it getting, unless it had been in solution—*e.g.*, in pyrites replacing wood of alluvial drifts, already referred to. It is not at all surprising that there is a difficulty in determining the presence of gold in meteoric waters, for it must be present in such very dilute solutions. It is only when concentrated in the pyrites that we can detect it, in the same way that we determine the presence of traces of other metals when concentrated in ochres and sinters deposited from solution. Gold has also been found in boiler scale deposited from mine waters, but as the water was not previously filted, one cannot state positively whether the gold was brought there in solution, or was suspended mechanically in the water. Gold has likewise been found in mine timber, but there is also a suspicion that it may have been forced into the wood mechanically, though it is more probable it was deposited chemically.

Solvents for gold are known in the laboratory, and conditions for the presence of such solvents in Nature appear to be favourable in some cases. Gold is soluble in chlorine water; in dilute solutions of iodine, which is the supposed solvent in the case of gold in the ocean; sulphides of potassium and of sodium also act as solvents for gold.

The reason we find gold in the metallic state is because that is the most stable form for it under existing conditions; it by no means follows that gold, as metallic gold, was formerly dissolved, it may have been some salt of gold. Chloride of gold, we all know, is soluble in water. G. Bischof found that gold sulphide was soluble in the same medium, but more especially so in water saturated with sulphuretted hydrogen; it is also slightly soluble in per-salts of iron. J. C. Newbery dissolved gold sulphide in an alkaline bicarbonate.‡ W. Skey§ states that gold absorbs sulphur, and that if it is a chemical combination, as present evidence tends to show, the sulphide of gold and platinum are so easily and so rapidly formed, we cannot doubt but that sulphur plays a very important part in the solution and translation of these metals from rock masses to intersecting quartz reefs, or from deep strata to superficial positions. A. Liversidge confirmed G. Bischof's statement about preparing silicate of gold, by digesting gold leaf with sodium silicate and potassium silicate solutions, under a pressure of 90 lbs. per square inch; the solution gave a brown precipitate with oxalic acid. Wilkinson thought that the hot water due to the basalt floes were probably favourable for the solution of gold. It is true that such waters appear to have altered the rocks with which they came in contact, but, on the other hand, we find large nuggets where there is no basalt near.

It has been stated that the largest nuggets are found in the western portion of Victoria, where the basaltic eruptions have taken place, while in the eastern part of Victoria nuggets over 1 ounce are rare. This is not strictly correct, for many nuggets larger than 1 ounce have been found in Gippsland; but what is still more important in drawing such a conclusion as the above is, that gold occurring in the reefs of the western portion of Victoria occurs chiefly in the Lower Silurian formation, and that in these the gold is generally found of a coarser nature than that in the Upper Silurian reefs, which predominate in the eastern portion of the colony.

Precipitants.

R. Daintree noticed that a small piece of gold, left in a gold-forming solution prepared for photographic purposes, had become plated with gold at the expense of the solution, owing to some organic body, probably a piece of cork, having fallen in. This started a number of investigators at work, among whom may be mentioned the late C. S. Wilkinson, formerly Government Geologist of New South Wales; J. Cosmo Newbery, analyst to the Mines Department of Victoria; W. Skey, analyst to the Geological Survey of New Zealand; Professor A. Liversidge, of the Sydney University, and others.

Mr. Wilkinson's experiments are given in a paper‖ "On the Theory of the Formation of Gold Nuggets in Drift." He extended Daintree's work, and succeeded in coating the following minerals with gold, using wood as a decomposing agent:—Iron pyrites, galena, chalcopyrite, mispickel, molybdenite, zinc blende, and wolfram. When metallic zinc and copper were used as decomposing agents, the gold was thrown down in a powder on the bottom of the vessel, and not as a coherent coating on the nucleus as with organic matter. This seems to point to organic substances as being the active agents in the precipitation of gold from solution, especially as the gold deposited on the pyrites had a mammillary form, like the surface of nuggets. We do not, however, find gold gilding pyrites in Nature, but distributed throughout it, often in the cleavage planes, and it would appear to have been deposited simultaneously with it. It might be objected that, assuming the iron was present as ferrous sulphate, and this being a precipitant for gold, that it was this salt which threw down the gold before it was reduced to iron sulphide, and that this might account for the intimate mixture of gold and iron pyrites. It is quite true that we can precipitate gold out of its solutions with ferrous sulphate, but not out of all. Moreover, if this salt had acted as the precipitating agent in our alluvial deposits, it would tend to disperse the gold over a large area, by reason of its diffusion in solution, rather than concentrate the gold in one place, unless, indeed, the sulphate of iron were localized in some unaccountable manner. W. Skey remarks in his paper "On the Reduction of Certain Metals from their Solutions by Metallic Sulphides, and the Relation of this to the Occurrence of such Metals in the Native State,"* that organic matter is not necessary to cause the precipitation of gold on the minerals Wilkinson experimented with. Skey employed sulphide of iron (proto and bi sulphides), sulphide of copper (ferro and sub sulphide), and sulphides of zinc, tin, molybdenum, lead, mercury, silver, antimony, bismuth, arsenic, platinum, and gold, also mispickel and the arsenide of silver. Cubical iron pyrites is rather slow in its action upon the solution of gold, while sulphide of antimony scarcely affects it at all at first, but after some hours' contact with it reduction goes on rapidly, perhaps by aid of some voltaic action. All these effects were produced at common temperature (with the exception of that of sulphide of bismuth), while the other experiments with iron and copper pyrites prove that similar effects are produced when all kinds of light is excluded, so that there is no reason to suppose that light has been concerned in any of these reactions. A portion of the metal of the sulphide operated upon was uniformly found in the solution afterwards, and also sulphuric acid. Iron pyrites has a greater reducing action than organic matter, and 1 grain of pyrites is capable of precipitating 8 and 1-6th times its weight of gold.

W. Green† thinks that an 80 ounce nugget found in the Raglan district was formed by electro-deposition.

W. Skey in a paper "On the Electro-motive Power of Metallic Sulphides,"‡ mentions that when pyrites and galena are placed in dilute acids or saline solution, and are connected by a platinum wire, that the current generated was sufficient to throw down gold from its chloride. The galena represents the positive element, and the pyrites the negative.

In his paper "On the Formation of Gold Nuggets in Drifts,"§ Skey says: That the gold precipitated on pyrites spreads over it and holds together, so that it is not affected by the mineral crumbling away; the pyrites is gradually oxidised, leaving only a little oxide of iron behind, such as is frequently found associated with nuggets. The gold will not be crystalline as the motion of the flow of liquid would be unfavourable to it, and help to produce the mammillated form our nuggets take. Nuggets would be larger than masses found in reefs, as the pyrites being less frequent in alluvial formations, would tend to localise the gold, besides, it would be subject to larger volumes of auriferous liquids than that comparatively stagnant in veins. Still, at the same time, we must remember that solutions of gold in creeks and rivers are even more dilute than those circulating in reefs, also that the circulation of water under the drift is not so great as that above it.

Skey found—"Critical Notes upon the Alleged Nuclear Action of Gold Reduced from Solutions by Organic Matter"‖ that when organic matter and metallic gold were added to a vessel containing sodium chlor-aurate, that the precipitate of gold on the metallic gold was no thicker than that on the sides and bottom of the glass vessel, and even on the surface of the liquid itself.

Professor A. Liversidge in his paper "On the Origin of Gold Nuggets"¶ states that when he repeated Wilkinson's experiments of precipitating gold on various nuclei—alluvial gold, reef gold, and artificial gold—with reducing agents—wood, cork, paper, and phosphorus in ether—he obtained just the opposite results to Wilkinson. The gold was reduced out of solution, but did not cohere to the nuclei, while the gold of the nuclei lost, instead of gained weight. The solution consisted of 15 grains sodium chlor-aurate in 15 ounces of water, and the experiments were done in the light, not in the dark like those of Wilkinson's and Skey's.

Liversidge further made forty experiments by forming galvanic couples with gold and some other substance. In 33 of these gold was deposited on the nuclei. The time occupied by each experiment varied from nine to 200 days. Some of the materials used that assisted in forming deposits were molybdenite, mispickel, iron pyrites, marcasite, limonite, hematite, chalcopyrite, redruthite, argentite, galena, zinc blende, graphite, charcoal, sandstone (white and red), washdirt, granite, quartz, clay, statuary marble, and serpentine. The metallic arsenides and sulphides formed stronger galvanic couples than iron oxide, carbonaceous matter, sandstone, granite, clay, and marble. Gold was frequently deposited on both the couples, either on the surface or between the cleavage planes of the mineral, having a vermicular and matted structure, mammillated and crystallised. As Liversidge found that plate-glass also formed a couple with gold, depositing gold on the nucleus, he suggests that in Daintree's experiments the glass of the bottle may have formed a couple with the gold, thus causing the precipitate he obtained.

Skey in his paper "On the Mode of Producing Auriferous Alloys by Wet Processes"** says:—1. "That solutions of chloride of silver in alkaline chlorides rendered alkaline by addition of potash, soda, or lime, are readily decomposed by common iron pyrites.—2. That this effect is not produced if such solution of silver is either acid or neutral.—3. That when chloride of gold is added to an alkaline argentiferous solution of this nature, such mixed solution is capable of depositing the metals contained in it in the form of coherent alloys upon metallic sulphides generally when presented to them.—4. That these alloys can also be found from such solutions by voltaic action."

Our surface rocks are alkaline or neutral, therefore waters percolating them at some distance from the atmosphere would be alkaline, and favourable for the deposition of gold and silver alloys. The acidity of the waters in our mines is brought about by the oxidation of sulphides in the upper levels, so does not contradict the above statement. As the water of rivers is more or less in contact with air, and contains oxygen in solution, it tends to be of an acid nature, and as gold is capable of being deposited in acid as well as alkaline waters, while silver is only precipitated in the latter, this accounts for the superior fineness of alluvial gold over that from reef.

Source of the Gold.

The general opinion of those who favour the chemical theory in order to account for the origin of gold nuggets, is that the gold was leached out of the country rock in which it was supposed to have been originally precipitated from solution in oceanic waters, by organic matter. To enquire how the gold found its way into the ocean is beyond the scope of this article. Others think the gold has been dissolved out of existing reefs; while still another section advocate thermal springs during the basaltic eruptions of Tertiary times.

If the gold was obtained as a sort of lateral secretion from the surrounding rocks, it seems strange that we have no recorded instance of its presence under what would appear to be favourable conditions, *e.g.* in salt beds, or associated with the pyrites of coal seams.

Conclusions.

Evidence goes to confirm the conclusions drawn by Liversidge, and I cannot do better than quote his opinion *verbatim*: "I think we can safely say that a nucleus of gold in an alluvial deposit, or in a vein, in contact with any of the foregoing substances, or other similar bodies, would tend to increase in size so long as the supply of gold in solution was maintained, and that masses as large as the largest known nuggets, or indefinitely larger, might be so formed. My own opinion, however, in spite of this, is that the large nuggets have not been so formed, but have been set free from veins, and have acquired their rounded and mammillated surfaces by attrition, the main outline being due to the original form of the mass when liberated from its matrix. Nuggets may have received deposits of gold from solution, but such deposits have, I think, made no material alterations in the the size of the larger nuggets."

* Jour. Roy. Soc. of N.S.W., Vol. XXVII. p. 340.

* 1865, Trans. Roy. Soc. Vic., Vol. ix., p. 53.
† Chem. News, 1872, Vol. 26, p. 159.
‡ "On the Introduction of Gold to and the Formation of Nuggets in the Auriferous Drifts." Trans. Royal Soc. Vic., 1868. Vol IX., p. 52.
§ "On the Absorption of Sulphur by Gold, and its Effect in Retarding Amalgamation." Trans. and Proce. N.Z.Inst., 1870. Vol. III., p. 232.
‖ Trans. Roy. Soc. of Vic., 1866, p. 1.

* Trans. N.Z. Inst., 1870, p. 325.
† "Overlooked Ore-Deposits" p. 11.
‡ Trans. N.Z.Inst. 1870, Vol. III. p. 232.
§ Trans. N.Z.Inst. 1872, Vol. V. p. 377.
‖ Trans. and Proc. N.Z. Inst., 1872. Vol. V., p. 378.
¶ Jour. and Proc. Roy. Soc. N.S.W., 1893, Vol. XXVII, p. 303.
** Trans. and Proc. N.Z. Inst., 1872, vol, v., p. 370.

MINING NOTES FROM JOHANNESBURG.

By H. BUSH, M.E.

(*Cabled Weekly*).

Chimes.

There will be a dividend of fully 150 per cent. from the flotation of the West Chimes.

Ginsberg.

Mine looking well, and now making nearly 20s. a ton profit. This will not be maintained with a larger mill, but a profit of 15s. can easily be maintained.

Roodepoort West Deep.

Deep Levels of Princess Banket and Durban Roodepoort. Future of company very bright.

Potchefstroom Estate.

Cause of recent boom in the shares was the striking of a reef that gave pannings of 8 to 9 dwts. This formation has been tried in other parts of the Estate with unpayable results, and it is now doubtful whether this reef is going to be a payable one, but the prospects at present are fair, but not good enough for the Estate to be capitalised at one million sterling.

Angelo Gold Mines.

On the capital of £225,000, and with 40 stamps crushing 60,000 tons a year, the mine will give a profit of fully 20s. per ton. As it is the intention of the directors to erect 60 stamps, a profit of £80,000 a year will be made. The mine is proving the richest on the field, and the weekly assays are running over 4 ounces, which, if this is maintained, will give a profit of 30s. per ton. With 60 stamps the mine has a life of 30 years.

Chimes West.

2,032,360 tons on Klein reef; 323,330 tons on Chimes reef. Life of mine, 39 years; £40,000 profit a year with 40 stamps, 20 per cent. per annum.

Steyn Estate (Deep Level Block).

South reef dipping at an angle of 30° gives 6,466,600 tons, with a profit of 20s. per ton; also a Main reef 3 feet in width, angle of 30°, gives 9,699,900 tons; and as this reef is now payable in the Banket Mine, payable results should be obtained on this block. It will take fully £500,000 to make a mine of this Deep Level block, but then we have 16,166,500 tons of payable ore. This amount will always be forthcoming. The Steyn Estate reef is opening out well, and is improving.

United Main.

The South reef, of which 24 inches is mined and 20 inches is milled, gives a profit of 26s. per ton, or a profit of £7000 a month with 50 stamps; 20 extra are to be erected at once, and a profit of £9000 a month will be returned. The Main reef is opening out well, increasing the life of the mine, which is looking well throughout.

TRUE BLUE GOLD MINING COMPANY.—A meeting of the True Blue Gold Mining Company (Limited) was held at 60, St. Paul's Church-yard, on Wednesday, to hear a statement from Mr. J. M. Greig (the liquidator).—The liquidator, in reviewing the history of the mine, said that the True Blue Company was formed in 1891, the purchase price of £50,000 being entirely in shares. The company had no reserve or uncalled capital. When money was needed to develop the mine a sum of £1000 was borrowed on mortgage, and further sums as required, amounting in all to £7245. The mine yielded gold, from its purchase by the company in 1891 to June 30, 1893, equal to about 8000 ounces, the value of which (£16,362) was expended, except £625 paid as dividend. An exemption was obtained as from December, 1894, to February 28, 1895, to allow time for the re-formation of the company, and since that date the mine had been let on tribute, the arrangement running to June 30 next. To facilitate the formation of a new company, the liquidator entered into an agreement for the sale of the equity of redemption for the sum of £1710, and under that agreement had received a deposit of £10. On October 24 last the mortgagees entered into an agreement with Mr. J. A. Thompson and Mr. H. J. Carson to transfer all their interest in the mine for £4700 in cash, with 10,000 fully paid-up shares of 5s. each, but with the option to the new company to pay them £5700 in cash without any shares. He (the liquidator) suggested that a new company should be formed with a capital of £85,000, to consist of 50,000 shares of £1 each, with 15s. paid-up, and 35,000 fully paid-up shares; 10,000 to go the mortgagees and 25,000 to be given to the parties applying for shares in proportion of one to every two applied for.—The Chairman said that if the scheme were carried through there would be £12,500 available for working capital.—Resolutions were passed in accordance with the liquidator's suggestion, a committee was appointed to choose the directors here, and the meeting was adjourned to June 12.

THE LONDONDERRY MINE, W.A.—"The work of thoroughly testing the Londonderry Mine in the vicinity of the Golden Hole is being pushed on apace," says the *Goldfields Courier*, "and five men have been employed in putting in an open cutting south of the famous surface workings. When our reporter saw the place, an excavation 15 feet long by 3 feet deep had been made on the course of the reef, and although not sensational, a few specimen stones raised have given some colour to the rumour in circulation that another rich patch had been struck. Several very fine specimens were discovered in the cutting, but as yet there is no appearance of a continuous shoot of gold. The bulk of the stone is merely battery stuff, and is being stacked on the surface as raised. It is intended to carry this open-cutting along the course of the reef for at least a chain both south and north of the Golden Hole, with a view to testing the common theory that the rich shoot has been faulted or thrown to the south or north. In the meantime, the sinking of the Golden Hole to the 50 feet level is being pushed on without change but with all speed, and no effort will be spared by the local directors to thoroughly test the value of the ground in the vicinity of the spot in which such phenomenal gold was found by the prospectors. There is no change in any other workings, but Lord Fingall is determined to thoroughly open up the mine as speedily as possible. About 100 men are employed by the company."

THE DRESSING AND METALLURGICAL TREATMENT OF NICKEL ORES.

PAPER BY A. G. CHARLETON, A.R.S.M.

MR. A. G. CHARLETON read a long paper on the above subject at a meeting of the Society of Arts on the 15th ult., as a sequel to one read some time ago on the "History, Uses, and Distribution of Nickel." He first gave a description of the dressing of the material in New Caledonia. This, he remarked, was an exceedingly simple operation. The mineral at the quarries is picked over by hand and divided into two classes: ore above 8 per cent. of nickel, and ore below that limit. The washing operations are conducted on "tyes" of a very simple construction. The delivery of ore from the quarries is effected by means of single wire-rope tramways, which are of an exceedingly primitive description. The expense of transport from the mines to the port of shipment is said to vary from 5d. to 8s. 4d. per ton, according to the situation of the mine; and this must be added to the cost of the ore, which usually amounts to from 12s. 8d. to £1 13s. 4d. per ton. Ore containing 7·5 to 8·5 per cent. nickel is worth, at the port of shipment, £4 7s. 6d. per ton; and ore with 9·51 to 10·50 per cent. nickel, £5 4s. 2d. per ton.

The principal mining companies are Le Société Nickel and the Société d'Exploitation des Mines de Nickel. The properties worked by the former company are all situated in the Thio district, and in 1890-91 produced 32,000 to 30,000 tons of ore, containing 7 per cent. nickel, whilst in 1892 and 1893 their output is stated to have been 40,0000 tons. Besides these two companies, there are several smaller ventures.

Le Société Nickel buys all the ore mined in New Caledonia, and owns some 60,000 hectares of mineral land on the island, but is only working 1000, from which it is said to clear a net profit of more than 6,000,000 francs in one year with a capital stock of 12,720,000 francs.

Norway.

The treatment of the Norwegian ores, which consist of nickeliferous pyrites and pyrrhotite, is confined to hand-picking. In some rich mines small bodies of ore have been found carrying 7 per cent. of nickel (as, for example, at Beirn), and in other places the ore averages about 5½ per cent. of nickel, but ore of this grade may be looked upon as being richer than the ordinary run. First-class smelting ore can, however, be usually sorted out, running 3½ to 4 per cent. nickel, but the bulk of the stone is much lower. In 1870 miners were satisfied with a yield of 0·8 to 1·3 per cent. nickel from the smelting ore, the actual assay of which showed 0·9 to 1·5 per cent. In later years, since the low-grade mines have been shut down, and hand-sorting has been conducted with more care, the yield has increased, varying from 1·4 to 1·5 nickel, at least, to 2·5 per cent., or on an average of (say) 2 per cent.

The cost of producing ore of this 2 per cent. grade varies from $1·67 to $3·09, averaging $2·38. One kilogram of nickel in the ore, therefore, costs 10·71 to 14·28 cents, the small quantity of copper contained in the ore being reckoned free. In a few mines operated on a large scale the cost may be as low as 7·14 to 9·52 cents.

The introduction of modern metallurgical methods would doubtless import more stimulus to the Norwegian industry than it at present possesses. The maximum output of the mines worked in Norway was 42,550 tons in 1876. Since that time the production has only been from 5000 to 19,000 tons per annum.

Speaking of the Sudbury mines of Canada, the author stated that the average contents of the ore was 3·36 per cent. of nickel, but the ore of three of the companies working in this district carried 3·19 per cent. of copper in addition, and the ore of one mine yielded, on an average, ·1007 per cent. of cobalt. The Canadian ores, like those of Norway, are merely sorted over by hand, and are not subjected to any mechanical concentration.

After giving a description in detail of the dressing operations in the Schneeberg district of Germany, he drew the following lesson from the operations in vogue there, viz., the necessity of careful sizing of sands and slimes previous to their treatment.

He then passingly referred to the new method of treating Canadian nickeliferous pyrites—viz., the possibility of concentrating it by means of a magnetic separation, which question has been discussed by Dr. Stephen H. Emmons in a paper published in the "Journal of the American Chemical Society."

A comparison of the results obtained by the magnetic treatment of samples of pyrrhotite from the Lancaster Gap Mine and from a Sudbury mine, made in Dr. Emmens' laboratory, coupled with an analysis made by Dana, show conclusively that the magnetic minerals are of the pyrrhotite type, but that the non-magnetic concentrates are of quite dissimilar constitution, and as the latter are much higher in nickel than the former, it is also clear that the nickel is not present as an element replacing iron in pyrrhotite.

Dr. Emmons considers that we may regard the minerals under discussion provisionally as represented by the following formulæ:—

Crystalline pyrrhotite, n (Fe_5S_4).
Amorphous " n (Fe S) x ($Fe S_2$)
Nickeliferous " n (Fe Sx $Fe S_2$) y (Ni S).

In conclusion, in regard to the practical problem of magnetic concentration of nickeliferous pyrrhotite, two samples analysed by Mr. Mixer gave the following results:—

	Gap. Per cent.		Sudbury. Per cent.
Division of the total sample:—			
Magnetic portion	58·66	....	92·95
Fulby magnetic portion ..	6·67	....	2·09
Non " " ..	34·67	....	4·96
2 Division of the total nickel contents:—			
Magnetic portion	16·25	....	58·01
Fulby magnetic portion ..	19·96	....	7·60
Non " " ..	63·79	....	34·39
3. Total in sample:—			
Gap	41·28	....	—
Sudbury	10·7	....	—
. Division of the total:—			
Magnetic portion	25·85	....	75·51
Fulby magnetic portion ..	7·12	....	9·07
Non " " ..	67·03	....	15·42
5' Percentages of in the portions:—			
Magnetic portion	18·20	....	8·70
Fulby magnetic portion ..	44·00	....	46·60
Non " " ..	78·80	....	33·20

Treatment of the Nickel Cobalt Ores of New Caledonia.

As a considerable amount of nickel ore exported from New Caledonia contains cobalt, which is recovered as a bye-product, the author next described the methods by which the two minerals are separated. The ore in question is said to have approximately the following composition:—Peroxide of manganese, 18 per cent.; peroxide of cobalt, 3 per cent.; peroxide of nickel, 1·25 per cent.; silica, 8 per cent.; ferric oxide, 30 per cent.; alumina, 5 per cent.; lime, 1 per cent.; magnesia, 1 per cent.; moisture, &c., 32·75 per cent.

Treatment of Garnierite.

The treatment of this mineral has undergone several modifications before arriving at the present practice. Having referred to the original plan of M. Garnier, he spoke of the modifications introduced by the Ferro-Nickel Company of France. As it was found impossible to refine the material in the reverberatory furnace, owing to the presence of sulphur, which has an extremely high affinity for nickel, it became necessary to revert to the old method of concentrating the metal as sulphide by the addition of pyrites of sulphur. The average composition of the ore available for smelting was:—Silica, 45 to 50; iron, 16 to 14; nickel, 8 to 7; magnesia, 12 to 10; alumina, 3 to 5; water and oxygen, 16 to 14 per cent.

Another and more improved plan of reduction is in a regenerative furnace resembling that used for reducing zinc oxide in Belgium, but having retorts open at each end. The mixture of oxide and charcoal is charged by a semi-circular scoop at one end, and when finished the charge is pushed out at the other end into closed receivers, where it is allowed to cool out of contact with the air. A furnace with 22 retorts is capable of reducing 1500 kilos of nickel-oxide, or 3000 kilos of nickel-copper oxides in 24 hours, the charge of 750 or 800 kilos requiring 10 hours in the furnace in the first and five hours in the second case.

After a description of the treatment of arsenical nickel ore, which the author took bodily out of Professor Roberts-Austen's "Introduction to the Study of Metallurgy," he went on to describe the treatment of cupro-nickeliferous mattes conducted at the St. Denis Works, in France, where the New Caledonian ores are treated conjointly by the dry and wet method, the latter being applicable to the cupro-nickeliferous matter obtained by a first fusion of the ore with pyrites containing copper and nickel. The matte is first attacked with sulphuric acid, utilising the sulphuric acid set free for the precipitation of the copper from the solutions previously obtained. The iron is precipitated as oxide by means of calcium chloride and an air-blast. Finally, the nickel is thrown down as a greenish gelatinous hydrated precipitate with the milk of lime. This oxide can be either utilised for the manufacture of sulphate of nickel destined for electro-plating, or dried calcined, and converted in the anhydrous white oxide obtained in the dry way, which can be reduced to metallic nickel.

Treatment of Nickeliferous Pyrrhotite in Canada.

After being sorted, the ore is stacked in the roast yards in roast heaps, containing some hundreds of tons. Combustion once started is kept up for eight to ten weeks, and results in the removal of much of the sulphur, which is lowered to about 7 per cent., a partial oxidation of the iron, and the thorough disintegration of the diorite gangue, owing to the swelling and oxidation of the ore. The roasted ore is next smelted with coke in low blast-furnaces of the Herreschoff pattern, the gangue serving as a sufficient flux, and the product being a regulus of nickel, copper and iron.

In 1889 the mattes of the Canadian Copper Company contained, according to analysis:—

	Per cent.
Cu	26·910
Ni	14·140
Fe	31·235
S	26·950
Co	0·235
Slag	0·935

By sorting out the pure copper ores for separate treatment, as previously mentioned, the nickel contents of the mattes have been increased. In February, 1891, the mattes contained:—

	Per cent.		Per cent.		Per cent.
Cu	16·94	..	16·95	..	17·84
Ni	19·40	..	21·47	..	23·45

The cost of producing nickel from the Canadian pyrrhotite ore works out as follows:—Mining and transport, 10 cents.; conversion in oxide, 9 cents; reduction to metal, 8 cents; allowance for loss, 4 cents; total, 31 cents per lb.

The author concluded his paper with an enumeration of the many applications of nickel, and the uses to which it is commercially put.

DISCUSSION.

Mr. R. MOND said there was one point Mr. Charleton had not mentioned. It was the electrolytic process for obtaining nickel from nickel copper matte, a modification of a well-known method. The nickel matte was treated with cupric chloride, which caused the copper and nickel to go into solution, and the iron also. Thus was obtained a solution containing nickel chloride, ferrous chloride, and cupric chloride. The iron was precipitated by any ordinary means, such as lime, and the solution was then electrolised at a low voltage and the copper deposited, and any final traces of iron which might be left were precipitated again by chemical means, either lime, soda, or some similar reagent, and then the nickel was extracted by another electrolytic current at higher tension. The process had only just been started, but it seemed to give satisfactory results, and might play an important part in the near future. The objection of Dr. Emmens to the process of Dr. Ludwig Mond—viz., that iron might be carried over—was one of very slight importance. By a proper regulation of the temperatures in the decomposition tubes it was easy to obtain nickel absolutely free from iron. The production of carbonic oxide in a pure state was an easy matter, and as carbonic oxide was continually circulating through the apparatus it was a very small loss which would occur, due only to leaks, which could be reduced to a practical minimum. There was not the least difficulty about that. He desired to thank Mr. Charleton for the great amount of valuable material which he had collected together.

Mr. WIGGIN said he had listened to the paper with great interest, having been connected with the nickel trade all his life. It was wonderful how the author had been able to obtain so much information. Towards the close of the paper he said it probably would not be long befor the price of nickel was reduced to 15 cents a pound. He hoped that would not be the case, but he regretted to say that at the present moment it was being sold in England at 1s. 1d. He hoped this paper would lead to a greater activity in the nickel-steel industry, in which England was certainly much behind other countries. It appeared that a great deal was being done in America, in Russia, in Italy, and also in Germany. England was proverbially slow in taking up anything new, but when she did she went into it thoroughly, and that, probably, would be the case in this instance.

Mr. J. T. VAUGHAN said he had heard the question of arsenic mentioned in conjunction with nickel, and that the arseniate of iron was passed as a bye-product, and was not utilised at all. He should like to know if that was so.

Mr. CHARLETON said he could not say definitely, but he believed it was used as some sort of wash.

Mr. VAUGHAN said the nickel from Norway contained a large quantity of arsenic, but that from Canada, he believed, did not.

The CHAIRMAN then proposed a vote of thanks to Mr. Charleton for the great time and labour he had spent in collecting so much information on this important subject.

The vote of thanks having been carried unanimously,

Mr. CHARLETON briefly acknowledged the compliment, and the proceedings terminated.

THE LONDONDERRY MINE.

By BRENTON SYMONS, M.I.C.E.

THE Londonderry fiasco and the abandonment of the Cashman's Brilliant Reward claim, together with the cabled news that London promoters are no longer anxious to purchase Western Australian mines, has produced a feeling of utter prostration in Coolgardie, which is also severely felt in the Murchison district.

Since the failure of the Londonderry rich shoot more than 900 claims have been relinquished, the storekeepers and middlemen not caring to add to their speculative advances. The labour conditions are so onerous, and the danger of "jumping" so ever-present, that it is somewhat surprising they have been able so long to supply the grub staked. In consequence, business is very dull at Coolgardie, and this dulness is also felt in Perth to a small extent. When claims are bought at a high figure by self-created experts on the faith of a "slug" of gold, and reported on by mining men interested in booming the gold fields, and then capitalised at three or four times the original amount paid, no success is possible—on the contrary, a catastrophe is to be dreaded. These failures have in every mining boom created well-founded fear in the minds of capitalists, and the short-lived prosperity has invariably been followed by a period of stagnation of more or less duration. But there is too good and extended a gold field in the interior for it to be allowed to remain unprospected and worked. Rich shoots of gold, and the number of reefs extending from Dundas to Cue a distance of 400 miles, and the great breadth of the auriferous rocks that are exposed by denudation between the granitic belt of the west, and the Mesozoic limestone far in the interior, proclaim an important district, that will attract the gold miner and promoter for many years to come. We may believe that although the boom reaction will spread distrust for a time, the mining districts will steadily advance, and, similarly to Johannesburg, will show itself a reefing district in which the speculative public can have confidence. This will be more especially the case when the present difficulty of procuring water is overcome, as it undoubtedly will be, by improvements in the treatment of gold quartz. At present so little serious mining goes on that, excepting a small quantity at Southern Cross, there are no piles of tailings to be met with. It has been objected to by many that the output of gold is insignificant compared to the number of men engaged, and that the results bear no comparison to the other gold fields of the world. This must be admitted as a rule, though Nova Scotia is an exception. The present unsatisfactory gold produce is due to the absence of alluvial in any quantity even approaching that of the gold districts of the Eastern colonies, and to the fact that no real mining has ever been intended, the claim-holders just holding their properties for prospective purchasers.

The veins now yielding two or three ounce rock will, perhaps, be unable, as they work out the shoot, to average so high a grade; but this will, to a great extent, be balanced by increasing cheapness of supplies, and by improvements in reduction. Even now, at Southern Cross, the total cost of treating has been brought down to about seven pennyweights, and there is every reason to expect that, as the working of the mines proceeds, economies will be introduced, so that the mines in the immediate neighbourhood of Coolgardie will be enabled to reduce quartz at a cost of eight pennyweights. There are undoubtedly numerous veins that are capable of paying good dividends if run on true business lines.

NOBEL DYNAMITE TRUST COMPANY (LIMITED).—An ordinary general meeting of the shareholders in the Nobel Dynamite Trust Company (Limited) was held on Thursday, at Winchester House, the chair being occupied by Mr. Thomas Reid, J.P.—The Chairman, in his opening address, said that the past year compared favourably with the previous one, which was all the more gratifying, and a proof of the soundness and strength of their concern, as the result had been obtained notwithstanding exceptional and unforeseen losses in the way of explosions, &c. The business of the past year had, in fact, on the whole, been very satisfactory, and, with that of the subsidiary companies, showed a steady increase; and with the general revival in trade—and more particularly the present and prospective development of mining enterprise—the prospects of continued prosperity in that direction were most promising. New markets were opening up, and there seemed to be every prospect of the coming year outdoing all the others. The consumption of dynamite in the Transvaal was increasing by rapid strides, and the company was erecting extensive works which would enable them to supply this important centre of mining industry. The Chairman concluded by moving a resolution for the adoption of the report and accounts, and the declaration of a dividend at the rate of 10 per cent.—The motion was seconded by Sir Charles Tennant, and carried unanimously.—The retiring directors having been re-elected and the auditors reappointed, the proceedings terminated in the ordinary manner.

ANOTHER RICH STRIKE AT THE 90-MILE, W.A.—Great excitement has been caused owing to the very rich patch which was struck in Horsen's claim on the Hicks' line of reef at the 90-Mile. The shaft in which the gold was found is about 10 yards from Hicks' boundary line on the south side. They put a shot into the reef at the 40 feet level, where they had just started to drive, about 3 feet in, and struck a rich pocket; for in two hours' time they had raised stone which is estimated to go from 200 ounces to 300 ounces to the ton. The stone is held together by gold, the casing also carrying good gold. Messrs. Moss and Hemmith, who are prospecting some 10 miles from the 90-Mile, have come upon a promising reef of specimens, which have created considerable excitement at the 90-Mile.

NEW VICTORIA MINE (COOLGARDIE).—A fortnight's crushing o ore from the New Victoria Mine (Coolgardie) at the Bendigo and Coolgardie battery gave a return of 288 ounces of gold from about 200 tons of stone. The stone was taken from the heap at grass at Moor's shaft, from which heap a trial crushing had previously been picked. The average yield of crushings from this shaft is 2 ounces 5 dwts. per ton. Captain Roberts says that the reef in the main shaft is disturbed, but payable gold is showing.

HANDS ACROSS THE SEA MINE (COOLGARDIE).—Specimens weighing about 6 dwts. are being forwarded through the Bank of Australasia to Mr. Henry E. Hurst, F.G.S., in London, who has purchased the property. The reef, which varies from 4 feet to 6 feet in width, has been found to carry coarse gold for a distance of 700 feet along the line of reef, whilst on the adjoining block north (Bloomfield's) the reef has been cut at a depth of 30 feet, 5 feet wide, and still carrying coarse gold.

MEETINGS OF MINING COMPANIES.

DEVON GREAT CONSOLS COMPANY, LIMITED.

A good half-year's work.—Dividends maintained and obstacles overcome.

THE ordinary general half-yearly meeting of the shareholders in Devon Great Consols was held on Tuesday, at Winchester House, the chair being occupied by Mr. PETER WATSON, J.P., C.C.

The SECRETARY (Mr. George Hadlee) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—I have in the first place to-day to give you a short account of the proceedings of this company during the last six months, a six months which, so far as the weather is concerned, has been beyond anything which has before been experienced in the company's history. You will remember that, a short time before we met in November last, there were very serious floods in Cornwall and Devon, during which the River Tamar rose considerably, and did a great amount of damage that was reported to you at the time. A bridge which conveyed our miners from the county of Cornwall—where many of them are resident—to the county of Devon, was swept away by the river. That was a serious difficulty, but one which we rapidly got over by using a boat to convey the miners from one side of the river to the other. A still more serious accident occurred, however, in the washing-away of the weir which cost us a very considerable amount of money years ago. That was a very unfortunate occurrence, in this way—that the water, instead of running down the canal and over the water-wheels of something like 700 horse-power at the mine, went away down the river. Consequently the wheels ceased to work, and the Watson's portion of the mine—where we raised a considerable amount of copper, as well as mundic—was cut off from us for a very considerable time; in fact, for nearly four months altogether. That serious accident has been explained to you in the report of the directors, and also pointed out in the report of Captain Clemo. Well, after the floods of October, November, and December, we had a heavy fall of snow and some very severe frosts. This interfered with our surface operations very considerably, and, in consequence of it, we have made a decreased quantity of arsenic, which explains why our accounts are not looking so well as they might otherwise have done. Still, in moving their adoption to-day, I do so with very great pleasure, for although we tell you of the difficulties against which we have had to contend, and the loss and damage we have sustained, yet, on the other hand, we are now emerging into a very much better state of things, and we hope to increase the quantity of the make during the next six months and to have a much better account to give you. I think, on that point, I may read you a letter I have received from Mr. Bawden. I daresay most of you have seen in the newspapers an account of the accident which has befallen Mr. Bawden—an accident which was very serious, and might have been much more so. Yesterday I received from him a letter, which I am going to read to you, and to-day I have had another letter, written in his own handwriting, which is now very shaky. The former letter is as follows:—

> DEAR SIR,—I am sorry that on account of my unfortunate accident I am unable to attend the general meeting of the shareholders on Tuesday next. When riding over the mine on Thursday, the 16th instant, my horse caught its fore fetlock in a signal wire, and pulling back and rearing violently broke the wire and fell squarely upon my chest, crushing me so severely that I am still confined to my bed. I am, therefore, giving you by letter a few particulars of the many difficulties we have had to contend with during the last six months. It will be within the recollection of the shareholders—it was mentioned at the meeting in November last—that on the 12th of that month the unprecedented floods in the valleys of the Tamar not only carried away our footbridge near Latchley, but also swept away about 50 feet of the west side of the weir which conducted the water into the main leat and our large pumping wheels (the said wheels representing nearly 700 horse-power), and also doing great damage to the banks of the leat. The result of this was that, although we worked the auxiliary steam-engines to their utmost speed, the mines were flooded to an alarming extent, so that the amount expended in repairing the damage to the weir did not at all represent the loss the company sustained by the flood, and this being followed by one of the most severe winters almost on record gave the local management such anxiety as they have not before experienced. Some parts of the mine from whence we have been getting a considerable portion of our copper ore, and some good arsenical mundic, were flooded for five months. The effect also upon our surface operations was most serious, as, for several weeks in succession, a large portion of our reduction works was completely idle on account of the waterwheels and pipes being frozen. This caused a very serious loss in our arsenic returns, and was such as never before has been experienced at these works, and we have not yet fully got through with the repairs consequent upon the excessive damage done to roofs, sheds, and machinery, especially the large waterwheels, some of which we have been obliged to bolt together with massive iron plates, forming almost the complete circle each side of the wheel. But for the great care and energy of the agents and workmen it would have been impossible to have shown any profits during the last six months. We, however, consider that the worst is now past, and shall hope, unless something unforeseen occurs, to meet the shareholders in November next with a very much better balance to the good.—I am, dear Sir, yours faithfully, MOSES BAWDEN.

That is really the gist of what I have to say to you to-day, and, under the circumstances, we have, I think, very fair reason to be satisfied with our record; for, as one shareholder said:—"It is a wonder you have not had £4000 or £5000 on the wrong side of the balance-sheet, instead of showing the account you do." We thought of paying you a 2s. dividend here to-day, but under the circumstances we have considered that it would be advisable to give you a dividend at the rate of 7½ per cent., which is 1s. 6d. per share, with the hope of giving you, perhaps, 15 per cent. or even a little bit more at the next meeting. (Applause.)

Mr. THOMAS GLEN seconded the motion for the adoption of the retort and accounts.

Mr. SLOPER said that he could see no reference to the halvans in the report, and he should be glad if, in future, the shareholders were supplied with information in reference to them, more especially as to the period in which they would be worked out. Then, in regard to the number of hands employed by the company, this used always to be put into the directors' report, and he did not know why it was left out on this occasion. Perhaps the Chairman would supply the omission. He noticed, moreover, that the office expenses, as stated in the account, were double what they were on the previous occasion, and he should like to know the reason of the increase. Another point on which he would be glad to have information was the number of barrels of arsenic belonging to other people now on the works. He was very glad indeed to see the increase in the prices of arsenic, seeing that it was from the product almost entirely that the profits of the company were derived; and the price of arsenic was now nearly double what it was a few years ago. He still wished to be informed how long it was thought the upper levels would last. He was not easily led away by the remarks of the Chairman, and he thought that his reference to his (the speaker's) grey hairs, made at the last meeting, did not tend to maintain the dignity of the chair. Some gentlemen present would remember the trouble he had in getting permission to see the leases, and he was very glad to be able to state that, having seen them at last, there was nothing objectionable in them. At the same time he thought the shareholders had a right to be made acquainted with the full contents of the leases. He might mention, however, that in the lease of the Duke of Bedford it was stated that no calls should be raised until £2000 had been set aside for the purpose of some sort of guarantee to the Duke of Bedford that everything would be put in place should the mine be thrown on his hands. This was a piece of information which he thought should never have been kept back from the shareholders. One other point upon which he desired information was the extent of the company's responsibility for land they had spoiled. The difficulties the board had had to contend against in regard to the floods were very fully set down in the report, and it was clear that during the past half-year they had had an exceptionally hard time of it.

The CHAIRMAN said that when Mr. Sloper had asked to see the leases the solicitor told him they had been put on the table for reference, and any of the shareholders could have seen them and asked any questions. The directors had nothing in any shape or form to keep back, and he had himself written to Mr. Sloper offering to let him see the leases. The secretary's minute on this matter was to the following effect:—"The secretary reported that, as instructed by the managing director, he had written to Mr. E. Sloper on the 10th inst., saying that Mr. Watson would show him the lease on that or the following day. Mr. Sloper called at 11 a.m. on the 11th inst., when the lease of the mines was handed to him, the managing director offering to give him any information relative thereto, which was declined. Mr. Sloper perused the lease until 11.50, asking only one question as to working 5 fathoms from the boundary. The plan was produced and the matter explained. Mr Sloper asked for the arsenic licenses and perused them. Further agreements were produced, but Mr. Sloper did not look at them. Mr. Sloper left at 12. On Mr. Watson enquiring—"Are you satisfied, Mr. Sloper?" he replied, "Yes; good day." This was the report of the secretary as to Mr. Sloper's visit. Now, to read over the leases, and thoroughly understand them, would take two or three days; consequently Mr. Sloper's casual visit could not have yielded him very much information. However, he came, examined them, and expressed himself as satisfied. So far as the clauses were concerned, the company had got the leases on more favourable terms than almost any other company. The board had worked exceedingly hard to get these terms, which were read and explained to the shareholders at a former meeting when the leases were adopted. Hitherto the company and the Duke of Bedford had always worked harmoniously together in respect to these matters; and having regard to the liberality with which both the past and present Dukes had acted towards the company, he thought Mr. Sloper's reference to the matter very inopportune. The mine was not going to be worked out in a week, or a month, or a year, or a good many years. His own remarks at a previous meeting in regard to Mr. Sloper's grey hairs were not made with the idea of giving offence to anyone. With regard to the halvans, which Mr. Sloper did not see mentioned in the report, they were included under the item of "stocks.

Mr. SLOPER: How long will they last?

The CHAIRMAN replied that it was a matter of utter impossibility to say how long they would last. As to the land damage the sum of £396 was paid for that when the leases were taken, and he did not expect there would be any sum worth mentioning still to be paid. The number of hands now on the property was 407. With regard to Mr. Sloper's remarks as to the office expenses he would like Mr. Sloper to tell him where he found the amount doubled.

Mr. NORRIS said that Mr. Sloper was evidently confusing the expenses for the last 12 months with that of six months.

Mr. SLOPER said he was glad to find he was wrong.

The CHAIRMAN: Well, it is not the first time, and open confession is good for the soul. Continuing, the Chairman said that he himself, might have wished that Mr. Sloper's remarks had been made in a different tone, and that he might have expressed some sympathy with the directors and officers in the amount of work they had had to perform, and the extraordinary obstacles they had had to overcome during the last half-year. Mr. Sloper might also, perhaps, have expressed some regret at the very serious accident which had happened to Mr. Bawden—a gentleman whom, to use a vulgar phrase, he used frequently to "pitch into" on former occasions. He could only say that without Mr. Bawden and Captain Clemo the company would not have been in anything like its present position. The anxieties which the management of the company's affairs during the last six months had given to the directors and officers had been very great indeed owing to the accident to the weir, and the risk of life and property which it had occasioned. The dividend to be declared at this meeting was, he was sorry to say—he having been associated with Devon and Cornwall since his childhood—the only dividend which the mines of the two counties would have paid during the past year. Mining there had been under a cloud for many months, but he hoped now that with the better price for tin, and with the distinct turn which had taken place in the commercial outlook of the country, they would soon see a better state of things than they had enjoyed for a very long period. During the last few weeks, tin had gone up something like £10 per ton, a circumstance which had very much encouraged those engaged in the Western mining industry. Many of the mines which had not paid dividends for some time, and had even latterly had to make calls to keep going, would, he believed, at no distant date resume their position upon the Dividend-paying list. The rise in the price of tin had been very satisfactory for some time. As he had told them at the meeting last year, he had not expected any rise in the price of copper. The state of things which had obtained when he made that statment had now passed away. Six months ago, he said that there seemed to be a prospect of copper rising before the next meeting. At that time the metal was down to something between £38 10s. and £39, and now it was just at £44, so that the rise he had predicted had taken place, and if it were to continue, it would help the company very materially. So far as arsenic was concerned, the directors had been able to make a much better contract than they had previously concluded, and he hoped that when the time came for them to make another one, they would succeed in obtaining even more favourable terms. During the period covered by the report, they had had the benefit of the more advantageous contract for two or three months, but for the ensuing six months they would feel the full benefit of it. He was able, therefore, to predict a much better state of things for the next half-year. (Applause,) At any rate, everything at the mines was now in good order, and everything in the books was charged up very closely, and there were not, he believed, any accounts in the country which were so carefully and closely kept as their own. (Applause and "Hear, hear.") The auditor said "Hear, hear," and he thought would tell them that great credit was due to their secretary for the way in which he kept his books. He would now put the motion.

The motion for the adoption of the report and accounts was then put, and carried unanimously.

Mr. COPPEN proposed the re-election of Mr. Glen as a director of the company, speaking of the great care and attention which he gave to the affairs of the company. He hoped he would continue long to serve them in the capacity of director. (Hear, hear.)

Mr. RADFORD seconded the motion, which was carried unanimously.

Mr. GLEN, in returning thanks, said that in view of the advantageous contract for arsenic they had concluded, he had little doubt that the record for the next six months would be much more satisfactory than the last, more especially as the management on the spot had expressed their determination to do their very uttermost to make leeway after the tremendously severe winter that had just been experienced.

The CHAIRMAN said he had omitted to mention that the employees at the mine were exceedingly grateful for the sum of £210 voted to them by the company, and the 50 guineas given by the Duke of Bedford. He was present on the occasion of its distribution, and could testify to the satisfaction and pleasure the gift had given to the miners and their wives and children.

On the motion of Mr. GRIFFIN, seconded by Mr. SLOPER, the usual sum of 30 guineas was voted for the maintenance of the schools of the miners' children.

The auditors—Mr. G. T. Rait and Mr. Freese—were, on the motion of Mr. NORRIS, unanimously re-elected.

Mr. FREESE and Mr. RAIT, jun.—who represented his father in that gentleman's unavoidable absence—in returning thanks, bore high testimony to the able manner in which the accounts of the company were kept.

Mr. COPPEN, in moving a resolution of condolence with Mr. Bawden upon his severe illness, said he felt sure that all present would feel deep regret at the accident which had occurred to their old friend the purser. He had been connected with the mine for many years, and was a most efficient, persevering, and industrious officer of the company. They all knew that in the locality of the mine he was looked upon by everybody with the greatest respect and esteem, and he thought it would be a matter of consolation to him to receive from the meeting an expression of regret that the accident had unhappily fallen upon him, together with the wish that he might soon be restored to health.

Mr. RADFORD seconded the resolution, which was carried unanimously.

Mr. LANE thought the hearty thanks of the shareholders and directors were due to the agents and staff on the mine, for the manner in which they had furthered the interests of the company during so trying a time. Captain Clemo and Mr. Bawden had exerted themselves with the utmost energy and ability to repair the accidents that had taken place at the mine, owing to the adverse climatic influences. Mr. Sloper had expressed doubt as to the duration of the mine, but he thought that when Captain Clemo, who unfortunately was unable to be present, had said that his previous expectations had been more than realised, this was all they could expect. He hoped the property would not be forced too much; the agents told them they could pay a dividend of 2s., but he thought it was much more important that the financial position of the company should be strengthened.

Mr. GRIFFIN said he had much pleasure in moving a vote of thanks to the directors and officers of the company, who had guided their affairs with the utmost ability through what was undoubtedly one of the severest winters that had ever been experienced in Cornwall.

Mr. FREESE seconded the motion, which was carried unanimously.

A brief acknowledgement from the chair terminated the proceedings.

WAIHI SILVERTON EXTENDED GOLD MINING COMPANY.

Preparations on the property.—A good start.

The first ordinary (statutory) general meeting of the Waihi Silverton Extended Gold Mining Company (Limited) was held on Tuesday, at the Cannon-street Hotel, Mr. W. T. MORRISON presiding.

The SECRETARY (Mr. M. P. Andrew) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—You are aware that this is a meeting held in compliance with the Act of Parliament. We are obliged to hold it within four months of the date of incorporation. It will interest you to know what has occurred since we were incorporated in February. Although we have nothing to tell you as regards absolute results, we have a good deal to say that is satisfactory. There were applications for 90,000 shares, and we had only 20,000 to allot. The directors allotted shares to almost every applicant. I think there were only 12 who got regrets, so that I think you will see that is a very fair distribution. The estimation that the public have of the property has been shown by the fact that the shares have never been at a discount. Our first duty was to select a good manager, and we wired out to the local board in New Zealand to obtain proposals from properly-qualified men. They were successful in obtaining the services of Mr. Adams, whose character on the other side was extremely satisfactory. This gentleman, at our request, has made a report on the property, and he has recomended to us certain expenditure which he considered necessary for the future development of the property. Subsequently to the appointment of Mr. Adams, and in view of the important recommendations as to expenditure made by him, we thought it desirable to have confirmatory evidence of the best possible kind that the expenditure was judicious and likely to result in good to the company. We, therefore, instructed the local board to obtain, if they could, the services of Mr. Richard Spratt, the consulting engineer of the neighbouring Waihi Gold Mining Company. That is an extremely successful company. It has a capital of £160,000, and its shares are selling for over one million sterling. Mr. Spratt has the credit of being the means, to a certain extent, of attaining these results. His expenditure has been judicious, and he has shown great knowledge and energy in the field. He accepted the appointment of consulting engineer to this company, and he confirmed in their entirety the recommendations made by Mr. Adams. The transfer of the property was completed on 25th April last, and the old Silverton company have behaved very handsomely to us. They have handed over many things to us which, under some circumstances, they might have perhaps made a claim for. They have given them to us absolutely for nothing, so that we are really in possession of rather more than we expected to obtain. Our local committee in Auckland consist of three gentlemen who are extremely well spoken of, and who from their correspondence prove themselves to be thorough men of business. They have not only devoted a great deal of time in getting everything ready for the development of the property, but they have been getting a great deal of machinery on much more moderate terms than the estimates originally made by Mr. Adams led us to anticipate. We are in negotiations for some additional ground which they think it desirable to have, and probably we shall get about 100 acres adjoining our property. I think I cannot do better now than read the letter of Mr. Adams, dated March 7:—"I beg to thank you for appointing me as your manager. I will use my best endeavours to forward the interests of your company. . . . . I would call your attention to the necessity of letting a contract for the supply of 2000 tons of firewood at once, also the erection of an office and blacksmith's shop at the mine." Then his report says:—"The main shaft is now down a distance of 108 feet from the surface. This is 88 feet below your smithy level. I would recommend starting a crosscut 100 feet from the surface of the shaft. This would give you a wall of 8 feet and a block of 80 feet below your smithy level. This crosscut will require to be driven a distance of 180 feet to cut the lode. . . . . The work can be in progress, and will not interfere with the erection of the permanent pumping and winding plant. Your main shaft will require making larger, so that you can sink 2000 feet if required. . . . The cost of this work will not exceed £225. . . . You will require a winding plant capable of winding 2000 feet. . . . and you will also require a pumping plant capable of carrying you down a distance of 2000 feet. . . . I would suggest the Cornish system. . . . Two kilns will be required to dry your ore to make it fit for crushing. I would recommend these kilns being put at the mine. This will be a great saving, as you will only require to convey to the mill the dried ore. It will also save elevating the ore, which, if done at the battery, would require elevating twice. The cost of these kilns will not exceed £300. A tramway will be required from the mine to the mill. . . . The cost of this line will not exceed £750. The battery will require to be made a dry crushing mill. This will necessitate new stampers and a complete new cyanide plant, erected on the most modern principle. The cost of this work will not exceed £2500." As regards this cyanide plant, you all know that this process is really making a complete revolution in gold mines. Mines which before were unprofitable are rendered profitable by this system. I am told that in New Zealand the process has been of enormous influence in developing the region as a gold mining region. Then he says:—"If you adopt the foregoing recommendations, I have not the least hesitation in saying you will have a complete plant, and from information I have received from men whose opinion is of value, you have a mine which warrants this expenditure." The total cost there is about £10,000. Then, on March 20, he writes:—"Since taking charge of your property I have carefully examined your reefs and the country surrounding them, and I am of opinion that they are simply a continuation of the great Martha lode in the Waihi Gold Mining Company's ground. Your reef called the Silverton is a fine body of ore—I would say fully 12 feet wide—and, judging from the returns obtained in the past and the gold-bearing veins I saw in the reef from wall to wall, in my opinion this reef will prove highly payable. This reef has been worked for a distance of 264 feet in the Smithy level. There have also been two winzes sunk—one for a distance of 36 feet, and the other 50 feet. . . . The bottom of this winze is 144 feet from the surface

of the outcrop. In accordance with my last report, the first work, in my opinion, is the opening an adit level at 80 feet below Smithy level, and driving on the main reef until its intersection with the Rosemont and Union lodes, as by so doing, and continuing on these lodes to the Wathi boundary, probably a free run for all water to this level will be found through their lode and tail race. This is my reason for advising temporary pumping to carry out this work during the erection of the permanent pumping and winding plant, and its being carried into effect may, and most probably will, materially reduce the amount of water to be pumped all through the future working of the mine. The evidence I have gained from the thorough examination of your company's property leads me to unhesitatingly advise the erection of such pumping and winding plant as will enable the continuing of work to at least 2000 feet depth, as advised in my report of the 7th inst., as the solidity and extent of the reef so far worked upon warrants the anticipation of its being valuable to this and further depths. . . . The Amaranth reef, which is cropping in the N.W. corner of your property, is a large reef, and will be worth prospecting. There has been a little surface work done on it, and I would recommend this reef being sunk on (say) for a distance of 30 feet, and assays taken to prove its value. After a careful examination of your battery, I found it would be advisable to erect 20 new dry crushing stampers, also stone breaker, and a complete cyanide plant. This work I estimated in my report of the 7th inst. to cost £2500." Then I will read you the letter of Mr. Spratt, in which he confirms the recommendations of Mr. Adams:—"In accordance with your request I have carefully gone over the report submitted to your board by Mr. H. H. Adams, in which are laid down his recommendations as to the best method of working the mine at present. . . . I am quite in accord with Mr. Adams regarding the class of pumping and winding machinery which he advises should be procured. The outlay, according to the estimates, may appear large, but as the reef system in this district promises to be of a very permanent character, preparations should be made to enable mining to be carried on at a great depth, and it will in the end be found to be most economical to have a thorough and efficient plant erected for this purpose. Generally, I think Mr. Adams' proposals may be accepted as in the right direction. I assume careful economy, guided by an intelligent forethought, will be practised in carrying out the works contemplated; and having the utmost confidence in the ability of the local board of directors to control and advise on all matters of expenditure, I have no hesitation in endorsing what has been recommended by your mine manager, who is quite capable to supervise whatever has to be done." I think these reports are extremely satisfactory, and you may rely on it that not one penny will be spent which is not justified, as far as we can see, by the prospects of the mine.

The CHAIRMAN, in reply to questions, said the capital of the company was altogether £60,000; 20,000 shares were issued to the public, and £20,000 constituted the working capital, in addition to the £5000 paid to the owners of the property.

A cordial vote of thanks to the Chairman terminated the proceedings.

VAN RYN GOLD MINES ESTATE, LIMITED.

Part of the property to be sold.—A unanimous assent.

An extraordinary general meeting of the Van Ryn Gold Mines Estate (Limited) was held on Tuesday at Winchester House, for the purpose of considering an agreement for the sale of a portion of the company's mining rights and property in South Africa to a new company, to be called the Van Ryn North Exploration and Mining Company (Limited). Mr. T. J. BEWICK presided.

The SECRETARY (Mr. S. J. Hogg) having read the notice convening the meeting, the SOLICITOR (Mr. J. Bristow) read the draft agreement.

The CHAIRMAN said: Gentlemen—It is not long since I appeared to lay before you a somewhat similar proposition to that now submitted, which has been carried out; and I think you will all recognise that it has been satisfactorily carried out. When we last called you together, it was for the purpose of disposing of a portion of the mynpacht, the proposal now before you is for taking under development the whole of the vacant ground lying to the north and east of the areas worked by the present companies—that is, ourselves and by the Van Ryn West Mining Company—covering a territory of something like 6000 acres. This, it may be said, is a large tract to dispose of all at once, but we safeguard ourselves by having obtained from the proposed new company an immediate payment of £70,000 fully-paid shares, and having secured a deferred interest of one-fourth of the profits by them on the sales in the future of any portion of the property. Besides the question of area, there is a further difference between the sale now proposed, and that made by us to the Van Ryn West Mining Company—namely, that in the plot taken over by the latter, the reefs were to a great extent proved, and some machinery erected, whilst in this case there is absolutely nothing in the way of plant on the ground, and the value of the reefs on it have yet to be proved. One reef has been discovered, and I will read to you extracts from cables received from the local committee at Johannesburg, dated the 10th, 13th, and 15th May, bearing on the subject:—

> 10th—Have struck a new reef measuring 3 feet wide; has a very promising aspect; have secured all that was available; 3500 claims. 13th—Outcrop of reef within the limit 3500 claims, about 4500 feet on the north of the Van Ryn reef, runs parallel for a distance of 12,000 feet within boundary if continuous. 15th—Outcrops assays 2 dwts. per ton; improvement may be expected at greater depth.

These cablegrams are in reply to questions we had asked. The Van Ryn Gold Mines Estate (Limited) as you are aware, held all rights over the mynpacht, and a small portion outside of it, but to carry out the sale of the estate advantageously, it became necessary to obtain possession of all rights over the entire property, and the local committee have, as you have heard from the cablegrams I have read, secured 3500 claims on the estate for this company, which is very satisfactory, and the thanks of the shareholders are due to them for the way they have safeguarded their interests. You will see, however, from the agreement that we have also reserved the surface rights of the homestead, with access thereto, and from the plan it will be seen we have also reserved a small portion of ground near the stamp mill for the use of this company. Now this is as far as I am able to carry you with reference to the ground unoccupied when this offer came before us. From the draft agreement read by the solicitor, you will have gathered that the terms of the purchase are very much on the lines adopted on the occasion of the sale to the Van Ryn West Mining Company—namely, that the capital of the proposed company is to be £170,000, in 170,000 shares of £1 each, of which 70,000 will be allotted to this company fully-paid in respect of the purchase; 50,000 shares, the subscription of which is guaranted by the New African Company are to be first offered *pro rata* to the shareholders of this company at 30s. per share, leaving 50,000 shares in reserve under option to the guarantors at 32s. 6d. per share in terms of the agreement which has been read to you. This arrangement provides £75,000 at once for immediate development of the property, leaving a reserve of £81,250 to be provided hereafter. The proposal before you, which the board recommend for your acceptance provides, when fully subscribed, a working capital of over £156,000, which after careful consideration, has been deemed necessary for the energetic and speedy development of this great area, and the largeness of the amount justifies, in the opinion of the directors, the policy of sale, as it means that your entire property will be got into active development without delay, at no cost to the company, while we retain 7-17ths interest in the capital of the new company, and receive over and above this amount in shares, 25 per cent. of all profits as and when realised on future sales of the property now being disposed of—that is, in cash or in shares, whichever the Van Ryn North Exploration Company may elect to take from any sub-company or companies they may form. So far as we are aware, except the reef referred to, little is known as regards the minerals that may exist in the property. There is, I may say, an opinion that the Rietfontein series of reefs may be met with on the estate, but this can only be verified by energetic exploration, such as the North Van Ryn Exploration Company propose carrying out. Should these reefs be found there, and be gold-bearing and payable—for they may be gold-bearing and still not payable—the value of the property will be greatly enhanced. Those of you who were present may, perhaps, remember that, in addressing you on the 21st December last, I referred "to the very large area owned by this company north and east of the mynpacht, in which it was possible might be found gold-bearing reefs." The property now under consideration is that to which I then alluded. Before putting formally the resolution which you are called together to-day to approve and pass, I shall be glad to reply, as far as I am able, to any questions shareholders may wish to put to me. I now beg to move—"That the draft agreement for the sale of a portion of this company's mining rights and property in Africa to the Van Ryn North Exploration and Mining Company (Limited) submitted to this meeting, be and is hereby approved, and that the directors of the company be and are hereby authorised to affix the seal of the company thereto, and to carry the same into effect." (Applause.)

Mr. F. A. GILLAM seconded the resolution.

Mr. VAN RYN said that when he last addressed the shareholders, nearly 12 months ago, the Van Ryn shares stood at about £1. At the present moment they stood at £9, and, taking the Van Ryn West at £5, that represented about £14, and they were much indebted to the New African Company and their representative, Dr. Magin, for what they had done. He hoped that many shareholders in the room had held the shares at those prices; if they had, they had certainly done very well. He regarded the proposal before the meeting as the fairest that could be made to any company. The Van Ryn were handing over a lot of the ground that was at present unexplored, but if that were going to turn out valuable, they would get a very large slice of the profits. They would retain 7-17ths interest in the capital of the new company, and would receive in addition 25 per cent. of the profits made. Of course, a good deal depended in a matter of this sort upon those who would manage the property, and he was quite convinced that if the New African Company and Dr. Magin had charge of it, it would be vigorously explored, and with great advantage to the shareholders. He personally thought a great deal of this property, and, therefore, confidently recommended the present proposal to the shareholders. He had taken a small part in the underwriting, because he believed in the property. Although they were parting with this upper portion, they retained quite sufficient in the mynpacht for them to work; in fact, in the mynpacht he supposed they would have about 6,000,000 tons of ore, sufficient to keep a 100 stamp mill going for 40 years, which he thought would be long enough for all present. (Applause.) He hoped the shareholders would agree to the proposal now laid before them, which had been very carefully considered.

The resolution was carried unanimously, and a cordial vote of thanks to the Chairman terminated the proceedings.

CARDIFF CASTLE GOLD MINES, LIMITED.

The company well under way.—Machinery dispatched.

The statutory general meeting of the Cardiff Castle Gold Mines (Limited) was held on Tuesday, at the Cannon-street Hotel, Mr. C. CAMMELL (the Chairman of the company) presiding.

The SECRETARY (Mr. F. Dever-Summers) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—Shareholders are often told that meetings such as this—namely, a statutory meeting, are merely formal, and that there is not much information to be given. I do not agree with this so far as a gold mining company is concerned, and I have gone the length of writing the main portion of my speech and submitting it for the approval of my co-directors. The importance of the statutory meeting is that you then get an opportunity of learning what has been done. As regards developments since we acquired the property, up to the present two new reefs have been found, so that it would appear we are possessed of even a better property than we expected. Without making any high-flown comments upon the prospects, we propose simply to lay before you a bald statement of facts, leaving you to draw your own conclusions. The company was brought out on February 11, with a capital of £90,000, paying £50,000 in shares and £10,000 in cash for the property, leaving a working capital of no less than one-third of the capital—namely, £30,000—fully applied for. I do not think that fuller particulars could have been given to shareholders than we gave in the prospectus; nor could directors have taken more trouble than we did to check the statements made. So much was the company thought of that, although the lists were only open for one day for London, the 40,000 shares offered to the public were considerably over-applied for, whilst not only did the shares go to a premium, but they have practically remained at a premium ever since. Many of the shareholders best capable of giving an opinion have increased their holdings, and a large poportion of the shares are now held by the directors and their personal friends. (Applause.) The property has been transferred to the company, and the following cable has been received from the manager of the National Bank of Australasia, Coolgardie:—"Good titles held by us; four leases in name of your company; conditions for preserving titles appear complied with." Our record up to the present is second to none. On 8th February—five days before allotment—the money was cabled out; a few days later the machinery was ordered, and Messrs. Oxley and Brazier shortly after appointed the manager, who has taken charge of the mine. Mr Williams left for the fields to assist in carrying out the policy adopted by the directors, and he has safely arrived. Mr. Oxley, of the well-known firm of Oxley and Brazier, whom, after enquiry, the directors had appointed as consulting engineer at Coolgardie, has arrived in England, and is here to-day to give you his views on the property. The ordering of the machinery has been proceeded with in the same prompt manner as the rest of the business, and we think that we have established a record of promptitude, part of the machinery having left last month, and the remainder being now on its way. Although we are working three shifts at the mine—that is to say, night and day—it is a race whether the mine will be developed first, ready for the machinery, or whether the machinery will be erected before the mine is sufficiently opened out, notwithstanding that we are 12,000 miles away, and have to cart the machinery about 150 miles at the other end. There has been no scamping in the construction of the machinery; everything is of the very best that could be obtained, and does credit, we think, to the manufacturers, who are all firms of good repute—Messrs. Fraser and Chalmers for the stamps, Adamson and Co. for the boilers, and Messrs. Robey and Co. for the engine. We have laid out our plans on the basis of at least 60 stamps; 20 head of stamps have already left with two Cornish boilers, either capable of doing the work. The engine is capable of working the full 60 stamps. By the first steamer 130 tons were sent off, and by the next steamer about 120 tons. The whole of our work will be under the direction, as consulting engineer in London, of Mr. Arthur Wilson, of 11, Queen Victoria-street, who was appointed after the formation of the company. The company has been very fortunate in another respect—for the erection of the machinery and the starting of the mill we have secured the services of Mr. A. W. Castle, who was most highly recommended by Messrs. Fraser and Chalmers, to whom he has been well known for 20 years, and who have constantly employed him in erecting machinery in various parts of the world. His skill in the erection and running of the machinery is combined with a thoroughly practical knowledge of mining. He sailed for Coolgardie on the 23rd inst. Some of you may consider that we have been somewhat premature in making a call. We have made it in the desire to avoid the possibility of the company being crippled in its operations by not having the necessary funds at its disposal. The reluctance exhibited by some boards to making a call opportunely, in the fear of inconveniencing a few shareholders, is a mistaken policy, which they have frequently had to rue, and which we do not wish to make. The directors have been asked why no market has been made in the shares. My reply is that it is not the duty of a board of directors to make a market for its shares; they rely for the appreciation of their shares upon the intrinsic merits of the property rather than upon any artificial inflation. However, in due course an application will be made for a quotation on the Stock Exchange. We have had various cables recently from the mines, from which we learn that the depth of the main shaft is now 71 feet on the underlay, whilst, in addition to the 5 feet reef discovered in March, showing good gold, another has been recently found 1 feet thick, which has widened to 3 feet. A shaft was sunk on the 10 feet reef, in order to run into the junction with the main reef, where it is expected to find rich gold, this being usually the case; and we had a telegram when 42 feet down that it showed good gold all the way. A cablegram received last Thursday states that the prospects continue to improve, and that the shaft is now sunk 71 feet on the underlay. We have not the slightest difficulty with regard to water. In the adjacent property they have 9000 gallons per day, whilst any amount of water could be cheaply pumped from Lake Lefroy, only a mile distant from the mines. It having come to the knowledge of your board that a company was being formed to supply the township of Coolgardie with water from Lake Lefroy, they took steps to secure the necessary water rights for this company, and these rights have been granted. Further steps are being taken to consolidate the company's blocks under one lease, so that all the labour can be concentrated upon the main shaft and its developments, instead of its being distributed over the several blocks, as now, in order to comply with the labour conditions imposed by the mining laws. Knowing that, however rapidly the operations might be pushed on, no actual results from mining could be arrived at before the latter end of this year, the board has not been unmindful of the special power given them under the Memorandum and Articles of Association, nor of the special knowledge of their experts, who deservedly enjoy the confidence of the general public. Accordingly they have engaged in three special operations. First, they have obtained an interest in an adjacent property at no cost to the company. Secondly, they have obtained, at a mere nominal expense—namely, at a pound each, some of the founders' shares in Mr. Williams' prospecting syndicate as the equivalent for the shares individually applied for in lots of less than 100 each by shareholders of this company. Thirdly, Mr. Oxley had obtained an option upon the two 12 acre blocks which adjoin the north end of this company's property. It having been found that the company's reefs run through them, Mr. Oxley, as an official of the company, handed over his option to us, and these blocks have been acquired by the company on most advantageous terms. As the whole area now owned by the company—namely, 72 acres, is too large for the company to work itself, it will no doubt be necessary to dispose of a portion, and when this takes place every shareholder will have due notice. We have given instructions to have weekly reports in writing upon the mine, and fortnightly telegraphic reports, and these will be published in the *Press*. In addition, the shareholders will be communicated with directly any news of importance is received. An interesting article, recently published in the *Statist*, gave particulars of the West Australian gold mining companies issued during the present year. If you exclude those that are practically exploring companies, not only did the purchase-price of the Cardiff Castle appear as the cheapest property—namely, £1250 an acre, as against some costing over £5000 per acre, but as having the largest working capital and the largest percentage of working capital in respect of its total capital of any company issued during this year. All the news we have received from the mines has been good news, and the directors' confidence in the property remains unaltered. I trust and believe that when we hold our first general meeting I shall have a good account to give you of the developments in progress at the mines, and of the result of those developments. (Applause.)

Mr. OXLEY said that before identifying himself with this property he made all possible inquiries concerning it, and was always given to understand, as he did at the present moment, that it was one of the big shows on the field. He had received a private report from Mr. Backhouse, who stood in good repute on the West Australian gold field, and he also said that in his opinion it was a very big show. He did not mean to say that on this property they had anything phenomenal. They did not meet with patches of solid gold, which appeared to be discovered in some mines, and perhaps it was all the better that it was so. The developments were being pushed on as rapidly as possible, and they might hope in five months' time at most to have the mill working, and to be receiving some returns. Everything possible was being done to push forward the interests of the field, and his firm would look after the management of the property, and push on everything as rapidly and successfully as they could. The mine was situated close to one of the largest lakes on the field, and he was afraid that they would have rather too much than too little water. There was abundance of timber, plenty of ore to mill, and it was only necessary to have the batteries erected, and the gold turned out, to be able to pay the dividends which he hoped the shareholders would receive. (Applause.)

A vote of thanks to the Chairman terminated the proceedings.

ANGLO-FRENCH MATABELELAND COMPANY, LIMITED.

The company's area largely increased.

The first ordinary general meeting of the shareholders in the Anglo-French Matabeleland Company (Limited) was held on Monday, at the offices, Winchester House, the chair being occupied by Mr. E. G. MOCCATTA.

The SECRETARY (Mr. W. H. Clark) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This is a statutory meeting, held in accordance with the requirements of the Act of Parliament, and, therefore, we have no report or accounts to present to you. The company was formed, as you are aware, to take over the assets of the Anglo-French Mashonaland Company—a company which was itself formed about two years ago. Our object in taking that step was partly to increase the capital, and partly to do away with the founders' shares existing in the earlier company. The number of shares given to the Anglo-French Mashonaland Company for its assets was 29,750, being 19,750 to the ordinary shareholders, share for share, and 10,000 to do away with the rights of the founders. The capital of our company is £60,000, of which, up to date, about £40,250 is issued, while the cash we have in hand as working capital is about £30,000. You will see, therefore, that besides the cash in hand, we have about 20,000 shares in reserve. The properties which the Company became possessed of are fully described in a report we issued a little while ago. The only thing which has happened since then is that we have received from the Chartered Company a land grant of about 250 square miles, which has been located by our representative in Mashonaland, Mr. Little, in the Manicaland district, with which selection he is extremely pleased. For some little time past we have expected Mr. Little to pay a visit to London, and he has arrived by this mail. We intend shortly to hold a meeting of shareholders, when Mr. Little will be present, and will give particulars regarding his work on our behalf in the country, and I venture to say that I think you will find those particulars extremely satisfactory. (Hear, hear.) There is nothing more that I need say upon the present occasion, but I shall be very glad to answer any questions.

Speaking in answer to SHAREHOLDERS, Mr. MOCCATTA stated that the 250 square miles he had mentioned were in addition to the properties specified in the report. Portions of the remaining shares might be issued; and, if so, the directors would consider whether it would be in the interests of the company to invite the shareholders themselves to subscribe for them.

The proceedings then terminated.

RHODESIA GOLD FIELDS, LIMITED.

The company's position on the Dividend-paying list assured.

The first ordinary general (statutory) meeting of the Rhodesia Gold Fields (Limited) was held on Tuesday, at the Cannon-street Hotel, under the presidency of Mr. HENRY PARTRIDGE.

The SECRETARY (Mr. George R. Saunders) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—I have been asked to take the chair to-day in the absence of Mr. W. M. Farmer, who is abroad. It is, however, fortunate that this, as you are aware, is not a business meeting, and there is very little to be done. We are called together to-day in accordance with the law, which compels us to hold our statutory meeting within four months of the formation of the company. But at these meetings it is usual to tell the shareholders something of what has been done, and although we are at present extremely young we have done something on your account. In the first place, we have placed a quarter of a million of ordinary shares and some 75,000 preference shares. The whole of the money received on account of these shares, which, as you are aware, is at present 10s. per share, has been invested in various stocks which we are entitled to hold under our Articles of Association. The whole of the stocks which have been purchased are not now held, as there have been changes, in every case, so far with a profit, and the cash profit realised and now in hand is an amount which, in the minds of your directors is quite satisfactory. I do not think you will expect me to say more on this subject than that we feel perfectly satisfied that when the time comes to issue our report our position as a dividend-paying company will be shown to have been at this date already assured, as far as the year 1895 is concerned I should mention that shortly after the incorporation of the company one of our directors, Mr. Radcliffe, retired, and we completed the number of the full board by the election of Colonel the Hon. Charles Gathorne-Hardy and Major Seymour Finch, whom we are glad to have with us. I do not think I need detain you with any further remarks, but if any shareholders has any questions to ask, we shall be very happy to answer them. (Applause.)

Mr. A. J. PERRING enquired whether the investments of the company were entirely confined to mines, or did they invest in other concerns like Buluwayo Waterworks.

Mr. EVANS said he had heard a rumour to the effect that the company had been formed for the purpose of relieving large holders of mining shares who had bought at inflated prices. There were several trust companies formed some time ago, as for instance, the trustees and executors and others of the Winchester House group, and he had been told that the Rhodesia Gold Fields was formed with the idea of relieving a lot of these large financiers of the considerable blocks of shares which they held in various companies, the shares of which had been unduly inflated under the present conditions of the African market. He suggested that it would be quite as well for the Chairman to publicly contradict that statement, which was otherwise calculated to injuriously affect the price of their shares.

The CHAIRMAN: I think I can answer both of these gentlemen in one sentence. We have a small holding of De Beers Mines—a sum not exceeding 5 per cent. of our subscribed capital. I do not think any shareholder will object to that. We also hold mining shares to the extent of £2300 or £2500, but those are the only mining shares that we hold. When I say that, however, you will understand that we hold the shares of companies holding mining shares. We hold, for instance, a considerable block of South African Gold Trust preference shares which stand in our books at par, and the prices of which to-day are at 15 per cent. premium. We do not hold any mining shares at all except, as I have said, a small holding of De Beers, and another holding which does not exceed £2500. The whole of the remainder of our investments are in shares and stocks which may very well be held by any trustee who understands South African affairs. (Hear, hear.)

A vote of thanks to the Chairman terminated the meeting.

THE MURCHISON GOLD FIELDS, LIMITED.

Reliable advisers retained for the company.—Avowal of a cautious policy.

The first ordinary (statutory) general meeting of the shareholders in the Murchison Gold Fields (Limited) was held on Wednesday, at Winchester House, the chair being occupied by Colonel ENGELBUE.

The SECRETARY (Mr. Arthur Hebden) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This occasion of the first general or statutory meeting of our shareholders, although of quite a formal character, enables your directors to give you an account of the objects for which our company was formed, and of the success which has so far attended our efforts, and from the latter some forecast may be made of our continued progress. All of you, no doubt, keep yourselves well posted in the news pertaining to mining enterprise in West Australia, and you will have noticed that the Murchison district, although not "boomed" to the extent obtaining at the Coolgardie gold field, shows its steady progress by the increasing number of mines which are being opened by the public and private batteries which are being started, and by the increasing yield of gold. There have been but few reports of fabulous "bonanzas," but the reefs have been proved to give a fairly constant yield, sufficient to pay handsome dividends, when more fully developed. Some four months ago our company succeeded in interesting in the enterprise a gentleman holding a responsible position under Government, who was in immediate contact with the working miners on the Murchison gold fields, and was thus in the best position to obtain reliable news of the rich discoveries as they occurred. We were also able to secure the services of a competent and cautious English expert, who had specially gone to the Murchison to investigate properties offered for sale in the English market; but unfortunately this gentleman contracted typhoid fever, and so has been of little use, and is now returning to England. Being in a position to obtain trustworthy news, and also being able to secure interests in promising properties at bedrock prices, it was felt that a good nucleus existed round which to build up an important company, and, aided by gentlemen of the financial world, the Murchison Gold Fields came into existence on January 31, 1895. The shareholders now number about 400. As you might expect, a large number of properties have been introduced to our notice, but up to the present two only have been thought worthy of attention—viz., the Bonnie Dundee, of 18 acres, situated within half a mile of Cue township, and the Rose of England, of 24 acres, about three miles from Cue. As regards the former, you have all received a circular inviting you to subscribe towards the issue of our first subsidiary company, which will be called the Golden Dundee, so that it is not necessary to say more here than to remark that this property bids fair to be a success, especially as we shall guard against over-capitalisation, and have taken care to get reports from the most trustworthy sources. This company will be launched after the Whitsuntide holidays, and the promises of support from many of our shareholders are so encouraging that we have no fear as to the successful result of the issue. As regards the Rose of England, we cannot at present say much, as it is under strict investigation. The owner is a gentleman of high repute in Perth, who has spent a large sum in developing the property, and has felt so certain of its value that he has erected a 10 stamp battery, with engine power, &c., complete, and this will be able to go to work within the next few weeks, and in our interests, should we decide to complete the purchase. Four shafts have been sunk, the deepest being 140 feet. Levels have been driven on the course of the lode, so that stoping ground is opened up, and all is ready to make returns. But, gentlemen, experience shows the necessity for caution, and, as I said before, we are still awaiting the reports of our inspector before coming to a decision. Another source from which we may expect income is by assisting promising mines, whose capital has proved insufficient, care being taken that our company is fully secured. It is understood that the continuation of the railway from Mullewa to Cue, a distance of about 200 miles, is now being pushed on, so that its completion will enable machinery and supplies to be conveyed much more readily and cheaply than at present, thus facilitating the equipment of existing mining properties, and also forming an advanced base of operations from which outlying districts can be explored, where the reports of prospectors show that large gold-bearing areas exist. Our company being early in the field may reasonably expect to share in the acquisition of properties in the newly-discovered districts and on favourable terms. I think, gentlemen, that the remarks I have made will show you that our company has a very good prospect of success, and it is confidently expected that we shall be able before long to present you with a fair dividend as the result of the first quarter's working.

A vote of thanks to the Chairman terminated the proceedings.

NITRATE RAILWAYS COMPANY.

A unanimous meeting.—The foreign element.

The 13th ordinary general meeting of the Nitrate Railways Company (Limited) took place on Tuesday, at Winchester House, Colonel J. T. NORTH presiding.

The SECRETARY (Mr. J. M. Cowper) read the notice convening the meeting.

The CHAIRMAN, in moving the adoption of the report and accounts, said they had not had quite a year of pleasure in connection with the Nitrate Railways. People had been trying to start railways, which he thought would ultimately be at the expense of the public. The working expenses had been larger, but in commencing nitrate works it was a question of freight. There were gradients of from 4½ to 5 per cent., and machinery and materials to build houses had to be taken up these gradients. For the first six months of the year they were doing this chiefly for the Lagunas district, and, at the same time, bringing down scarcely anything except empty cars. That was the reason of the working expenses having increased. Now, however, the North Lagunas and the other Lagunas oficinas had been started, and nitrate was being brought down. Last year also they had had to pay a considerable amount in return freights to those who came in and made contracts with them. As part of the tariff reduction agreements entered into with producers at the beginning of the year, large sums had been returned in respect of the receipts to secure renewals of carriage contracts. Besides the British shareholders, a large foreign element had come in, who were represented at the meeting, and who had largely invested in the shares of the company. He did not know what the "bears" were going to do before long. He would not talk about "cornering," but when they found how many ordinary shares had been transferred to bearer's shares they would be somewhat surprised. (Laughter.)

The SECRETARY said that 56,696 ordinary shares had been converted into shares to bearer, leaving 38,098 registered ordinary unconverted shares.

The CHAIRMAN said that of these he had bought this last month about 10,000, showing the confidence he had in the business. (Applause.) He had told the secretary to bring the contracts with him, so that the "bears" could have a fair chance with him. With regard to the future, he would not like to prophesy, but he would be satisfied with a return of at least 15 per cent., and then they could build up a reserve fund again. It should be remembered that they had paid about £250,000 as a reserve fund for debenture bonds, besides the dividend. It seemed to him that a 5 per cent. rate for such a security as the debenture bonds of this company was too much, and he believed that in the future they would be able to get the money at 4 per cent. If that were done there would be a saving to the company of about £20,000 a year. (Renewed applause.) He believed they could get the money at that rate; and, in fact, they were now negotiating for it. He considered the company was never in a better position than it now occupied. He might say that Mr. Martin, who had just come from Chili, was present, and he would be able to tell them something about the condition of the line. Mr. Martin was a civil engineer, who had built the line, with one of their directors, Mr. Manby. Mr. Martin thought he would like to go and see the old place, and he only returned last Wednesday. Perhaps, therefore, he would tell them what he thought of the property.

Mr. MARTIN, who had come back last Wednesday from Chili, said he had gone over the line in a special train from Iquique to Pisagua, and afterwards to Lagunas, and he had never in his experience travelled over a line in such good condition. (Applause.) On the Lagunas extension, which was the new line, they travelled 20 miles in 30 minutes, and 40 miles an hour, without the slightest difficulty. He had inspected all the branches, and had observed that great numbers of the curves and gradients had been improved. The greatest credit, he considered was due to the manager and engineer, and, as the original engineer of the line, he had very great pleasure in travelling over it again. (Applause.)

The CHAIRMAN said the foreign element were taking a large interest in the concern, and the directors had been asked to elect a gentleman at the board representing the French shareholders, and another as representing the Belgian ones. The board had no objection to that proposition, and they were willing to elect the two foreign representatives—a step which could not fail to assist them with their friends on the Continent. He understood that the board could do this, and that it merely required the confirmation of the shareholders, which he believed would be readily given. The company had now been working for 7½ years, and during that time it had paid 156¼ per cent. back in dividends. (Applause.) So that, independently of what people said, it was not at all a bad business. Besides, they had given a bonus of £180,000, so that they had reason to be satisfied, notwithstanding what their opponents said. They would quite understand that the "bears" would not attack a weak thing, but they always liked to have something good to go at. (Applause.) The Chairman then proposed the adoption of the report and accounts.

Mr. CARTER had noticed a great difference in the market price of the ordinary shares and those which had been converted into preferred and deferred. He had no wish to sell, because the investment was too good for that and the price too low, but it was an unpleasant thing for one to see that the two shares combined did not make with £3 of the total. He would like again to ask whether it would not be possible to reconvert them again.

The CHAIRMAN, in reply, said he was the biggest shareholder in the company, and he had converted every share he had. He bought about 10,000 last month, which were not converted, and there were very few of these now left. He believed he knew where they were, but the "bears" had not got them. That was why they were paying the price they did for them, but they would all find their level directly. They could not reconvert the shares. He had paid over 20 the other day, and he was satisfied with them, for he would not be surprised if they were 25 before long. The difference was because there were so few of them in the market.

Mr. BUYSSCHAERT, the representative of the Belgian shareholders, asked why the meeting had been postponed to the end of May.

The CHAIRMAN replied that they did not get the accounts in time to hold the meeting earlier.

Mr. BUYSSCHAERT also asked whether the two competing railways would affect the traffic of this company.

The CHAIRMAN said that no doubt they were carrying traffic, but, as far as he could learn, one of the lines had not been a success, and he did not believe that the other was likely to be successful. These lines did not appear to give satisfaction, and there were lawsuits all round. The Nitrate Railways had a few law-suits no doubt, but none for demurrage. All the ships which came to the line suffered no demurrage.

A SHAREHOLDER asked whether it would be possible to make the converted, preferred and deferred, shares payable to bearer, the same as the ordinary shares.

The SOLICITOR replied in the affirmative.

The CHAIRMAN said that this would doubtless be done by-and-bye. (Applause.)

Mr. R. R. LOCKETT (vice-Chairman) seconded the resolution, which was then unanimously agreed to.

Mr. LOCKETT moved the re-election of the retiring directors, Colonel J. T. North and Mr. Robert H. Fowler.

Mr. J. J. SMITH seconded the resolution, which was put and carried.

The auditors, Mr. E. M. Underdown, Q.C., and Messrs. Deloitte, Dever, Griffiths, and Co., were then reappointed.

Mr. ALEXIS MOLS, speaking in the name of the Continental shareholders, thanked the Chairman and the board for the fair replies to the questions asked by Mr. Buysschaert. He would also thank them for the step they had taken in proposing to nominate two foreign directors, who, he believed, would be of some use on the very competent board of the Nitrate Railways Company. (Applause).

A cordial vote of thanks to the Chairman terminated the proceedings.

ZEEHAN-MONTANA MINE, LIMITED.

The company's property in a good condition.—The prospects brighter.

The shareholders of the Zeehan-Montana Mine (Limited) held their third ordinary general meeting on Tuesday, at the offices of the company, Mansion House Chambers, Queen Victoria-street, E.C., Dr. A. MATTEI presiding.

The SECRETARY (Mr. F. J. Warner) read the notice convening the meeting.

The CHAIRMAN, in formally moving the adoption of the report and accounts, said that as Mr. Griffith, one of the directors, had only just returned from visiting the mine, the shareholders, doubtless, would like to hear from him an account of what he had seen there, and, therefore, he would not trouble them with any remarks.

Mr. GRIFFITH: I have just returned from the mine, and I shall be very glad to accede to the request of your Chairman, and give you an account of my visit. The model in clay which you have on the table I have had prepared in order that you may more easily follow my remarks. The principal work in the past has been confined to the south east corner, and I must say at once that I was extremely well impressed by the condition in which I found the machinery, and the manner in which Mr. Craze has carried out the development of the mine. His former experience at Arizona has been of great service to him in grasping the true character of this property, and I may assure you that you have every reason to place the utmost confidence in his management. I will give you an instance of it. Having asked him to put some men in to work the north-west corner, he refused to do so on the ground of the heavy expenditure. Whenever Mr. Craze has asked for £1500 for a month's work, the expenditure has always been £100 short; and when he has promised you 100 tons of lead he has given you 105 tons. Mr. Craze, finding my heart was set on attempting to find this lode, consented to send a miner to cut a tunnel, and he had the good fortune to find the lode after a few hours' work. This lode has yielded us £780 of lead, at a cost of £250. Another satisfactory feature I noticed at Zeehan is that the three captains of the English mines—Mr. Vincent, Mr. Craze, and Mr. Tilley—all work very harmoniously together, and this very often results in a great saving to the company. I need hardly say that I went down to see the lodes, but it is only right that I should tell you that it requires a great deal of experience to understand what you are shown when you are down a mine. Having had an opportunity of carefully examining the north-west corner, which is a very wet part of the property, we found the lode to be in two strings of galena of 4 inches each, assaying about 75 per cent. of lead and 105 ounces of silver to the ton. In Albany, however, I received a telegram stating that the lead had cut out from the lode at a depth of 50 feet, but on my return to London we have again been informed that the galena makes 5 inches in thickness on one section of the lode. Two other sections have yet to be found by crosscutting. Just before leaving the property I gave instructions that the tramway should be continued to the north-west corner, and in doing this work Mr. Craze cut a new lode, which is to be called No. 6 lode, and which produced 4 tons of lead in the cutting 5 feet high. This lode has again been struck 150 feet north of this spot, and the captain of the Crowe Mine hopes to get the benefit of it in his property. It is my impression that this is a continuation of one of the lodes of the Western Company, a Tasmanian property, which, under Captain John Provis, has paid a dividend of 1s. a month for several months past on 30,000 shares, which are selling at Hobart at a price which places the mine at the value of £150,000. I found the shaft, the engines, the tramways, and the buildings all in excellent order, and I consider, therefore, the £1400 written off for depreciation is virtually a sum of money put to the reserve fund. Our north-west crosscut from the main shaft, which has been stopped by the orders of the board, as it appeared to be passing through a barren country, will now prove to be an extremely useful point, as the manager can, by extending this drive, cut the new lode No. 6 at a depth of 120 feet, thus giving us 120 feet of stoping ground. The manager expects by driving 140 feet to cut the No. 1 lode at the second level near the spot where it proved so very remunerative in the upper levels. When these developments are complete, I anticipate that the mine will be in a position to return to the shareholders a really handsome dividend on their capital. I do not consider that we have done badly this year, as we have divided 6 per cent. among the shareholders, and practically carried 4 per cent. forward. I may state that we have £3000 at our bankers, £3000 in lead coming forward and raised, and £4600 still uncalled, so that our financial position is very sound, and we have more than ample for our requirements. I beg to second the motion for the adoption of the report and accounts.

The motion was then put and carried unanimously.

It was also resolved—"That a dividend be declared at the rate of 4d. per fully-paid share, and 2½d. per share of 12s. 6d. paid, making a total distribution of 1s. 4d. and 10d. respectively out of the profits for the year, payable to all shareholders on the books of the company on the 1st July."

Lieut.-General Sir ORIEL TANNER, K.C.B., proposed a special vote of thanks to Mr. Griffith for visiting the mine, and for the valuable information he had given to the shareholders.

Major-General STEWART seconded the motion, congratulating the shareholders on the success of the mine, and the bright prospects before them.

The motion having been carried, and briefly acknowledged.

Mr. Griffith and Dr. Mattei were re-elected directors of the company and Messrs. W. B. Keen were appointed auditors, and the proceedings terminated with a cordial vote of thanks to the Chairman and board, proposed by Mr. L. SWINBORNE, and seconded by General BLACKER.

WE are glad to learn that our recent articles on "The Gold Mining Industry in Wales" have been successful in calling attention to the wealth of the Principality. A company has been formed under the name of the North Wales Mining Proprietary (Limited), and this company has already secured two of the richest properties in the neighbourhood of Dolgelly. We are informed that the directors, accompanied by their consulting engineer (Mr. E. Henry Davies, F.G.S.), propose to spend their Whitsun holidays in inspecting their new acquisitions, and we wish them every success in their undertakings.

ASSOCIATED GOLD MINES OF WESTERN AUSTRALIA.

An exhaustive account of the company's affairs.

A meeting of the shareholders of the Associated Gold Mines of Western Australia (Limited) was held on Wednesday, at Winchester House, Old Broad-street, E.C., to hear a speech as to the condition and prospects of the property from Mr. George Brookman, the Chairman of the Coolgardie Gold Mining Company, of Adelaide, and Chairman of the local board of the company in Australia.—Mr. JAMES JUDD occupied the chair.

The SECRETARY (Mr. E. F. Tremayne) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—Our object to-day is a very simple one, and it will not be necessary for me to detain you five minutes, our purpose being to hear what Mr. Brookman has to tell us. He is, as you are aware, Chairman of the Coolgardie Gold Mining Company of Adelaide—that is to say, the parent company, who have placed upon the London market a number of mines, which may be called generally the Great Boulder group, of which mines the company represented here to-day—the Associated Gold Mines of Western Australia—have purchased nine. He, therefore, will be able to tell us what occurred before the launching of these mines in London, the moneys expended by the syndicate on the spot in developing and testing the mines before they were brought here, and, generally, the results that have attended the operations in the adjoining mines as well as your own. One thing we hope will characterise the conduct of the management of the Associated Mines, and that is the perfect openness with which all the proceedings connected with the company shall be submitted to the shareholders themselves from time to time. It is an unusual thing to hold two meetings so quickly as we have done in this case, and, probably, having regard to the value of your time, we might not have done so but for the circumstance that our friend here, Mr. Brookman, will shortly return to Australia, and unless we get the information I have alluded to from him now, we shall not be able to get it directly at all. That being the case I shall ask him to furnish us with these particulars, and to speak generally as to the future prospects of our company, incidentally referring to the others immediately adjoining. (Applause.)

Mr. GEORGE BROOKMAN said: Gentlemen—I had the pleasure last week of addressing the Great Boulder shareholders, and I wish it could have been arranged for me to speak to the shareholders of both companies together, as public speaking is not very much in my line. However, as your directors asked me to give you information regarding your claims, and having visited those claims last January, I very readily consented. I gave last week a short account of the inception of the Coolgardie Company, showing that it started with a very small syndicate, and was gradually enlarged, till we had spent some £40,000 in developing the Boulder and Associated Mines before we sent them to London. The directors of the Coolgardie Company felt that before they could send any property to London, or place any lease in Adelaide, they ought to develop it, so that they would feel sure they would not offer a property that afterwards they might be ashamed of. The Associated Company have, in all, 10 leases, comprising about 200 acres of land. These leases are situated right on the belt of the auriferous country. The first block I will deal with—I shall have to refer to my manuscript a little, because the statement I make to-day I wish to prove with facts as to measurement and depths of shafts that have been sunk—is the Lake View South. This block adjoins Lake View. The Leviathan lode, which is a lode we have traced now for 7 miles, passes through this lease, and also Lake View Extended and Adelaide. On the Lake View South there is a quartz lode 250 feet east of the Leviathan lode. That is a distinct lode. We have the large Leviathan lode, about which I will give you particulars presently, and in addition to that 250 feet we have this other lode. On that a shaft has been sunk 90 feet: the lode is 2 feet wide, showing gold freely. The Australia lode also runs through this property near the eastern boundary, and is 5 feet wide and very strong. On the adjoining block, called the Lake View, which is a company registered in Adelaide—I am giving you this as an illustration of the value of our own block—the reef has been placed the whole length of the property—a distance of 3000 feet. Eight shafts have been sunk, varying in depth from 60 to 130 feet. The average width of the lode is from 10 to 6 feet. At the lowest depth it is 6 feet wide, and is solid, compact quartz. This company has now crushed 1400 tons of ore, giving an average of between 3 and 4 ounces to the ton, and possibly, this being, as you may say, a large result, some people fancy the stone is picked for crushing. I have brought a piece of stone with me, which will be handed round the room, so that you may get an idea of the stone you have in your own block, the Lake View South. I have shown by these figures that the lode now is tested to the full length of this block, which is 3000 feet, and they are down 130 feet, and any of you gentlemen who are fond of figures may easily work out the number of tons they have in that mine. This lode goes into your own, the Lake View South, and you have a shaft down 90 feet, and other shafts are down 60 feet, 70 feet, and various depths. On the Lake View Extended, the next block to the Lake View South, the lode passes through, and this block was pegged out very cleverly to catch the Royal Mint lode. It was pegged out crossways, and by that means they have secured the Royal Mint lode, which I may say is one of the best in the district. That company has crushed, I think, about 100 tons, giving them an average of 6 ounces to the ton; so that, besides the Leviathan lode, you have also the Lake View in that block. On the Adelaide a shaft has been sunk 70 feet on a lode of quartz 2 feet wide, showing gold. This lode dips to the east. A large iron lode, 13 feet wide, carrying fine gold, passes through the property, between the Leviathan and Iron reefs, so that you have really three distinct reefs on that block. On this block thousands of ounces of alluvial gold have been recovered by the dry blowers. These dry blowers have a miner's right, and pay £1; and for two years they can go on any leasehold ground, whether it belongs to a company or not. The process by which they win the gold is to have a number of sieves, and they gradually get the fine stuff down until they blow it away and get the gold. By this means thousands of ounces have been won in the country. After a heavy shower of rain a man in the employ of one of the mines near picked up a nugget weighing 90 ounces, so you can see clearly there is plenty of gold about on these blocks. On this block a bore has been put down which cut water at 115 feet, so there will be no difficulty as regards water on this particular block. From the slate which is on the Adelaide property, there is every indication that the block will be one of the most valuable of the Associated Company's properties. I do not give that as my opinion. I wish all of you distinctly to understand that the opinion I am giving you to-day is gained from the different experts on the mines. I went all round the blocks and had three or four of the best men with me, and I got my information from them. Of course, I use my own intelligence to the best of my ability, but you have also the benefit of the opinions of others as to what I saw. I will now come to the Australia blocks. I think you have heard a good deal about the Australia lately. (Hear, hear.) This is a very promising block of 18 acres, and has one lode 2 feet wide in the drive, which is 50 feet from the surface, and has been driven on for 30 feet north and 22 feet south. The stone, from appearance, is not particularly taking, as you will see; it is not composed of white quartz with veins of gold running through, but it crushes very well. At the time of my visit some splendid stone was taken out, and the pieces now on the table are some that I took from the heap. The reef has widened to the full width of the shaft. When this reef was cut first it was only some 3 inches wide, and it has gradually widened out until, at 90 feet, it was 4 feet wide, and had every appearance of getting wider as we continued the sinking. The manager intends to follow the lode on the underlay; as the gold goes down he follows it. This lode was about 3 inches at surface, and has gradually opened out to its present size. On the same lode 250 yards north, there is another shaft 48 feet deep, lode 2 feet 6 inches wide, carrying nice gold. In this block, east of this lode, three others are known to exist, ranging from 15 inches to 2 feet 6 inches wide, carrying good gold. That is the block recently put on the market, and there is no doubt that whatever company gets it they will have a magnificent block, whatever they pay for it in reason. It is a fine hill about 100 feet high, and these reefs can be traced right through the property, into the ground of Australia North. In Australia North a tunnel has been driven in the hill for 120 feet, cutting through a quartz lode from 9 to 12 feet wide, carrying nice gold. Very nice specimens have been obtained from this lode. About 40 feet further it is expected to cut another lode which is known to exist on the surface, and is thought very highly of. On the top of the hill, 100 feet further east, another lode has been exposed for 120 feet by an open-cut. Some 250 tons of stone await treatment. In Australia East several large lodes pass through this property, including the Royal Mint lode, and also the Australia North lode, on which a shaft is being sunk to a depth of 97 feet. There is very large quartz below, 30 feet wide, carrying gold on the surface, in the shaft sunk on the lode. This quartz blow requires more tunnelling, and from what I can gather from the managers they think it will turn into something very large. There is every appearance of getting some very big reef there. Well, that disposes of the East Australia. I have shown you conclusively the development work done at 90 feet, 70 feet, and 60 feet. We have proved that you have got the reefs there, and all you want to do is to develop them further, put up machinery, and extract the gold. As to the Iron Duke, that is an immense iron hill; you can knock off pieces in several places from the hill, and I think you can get out of 20 pieces 12 containing gold visible to the naked eye. There has not yet been much done with the iron. We have had a ton or two sent to Adelaide and had it tested by the cyanide process, by which process they can obtain 97 or 98 per cent. of the gold. I think it would be as well, until the railway is completed, to delay the crushing, and go on developing the reefs, but there is not the slightest doubt when the railway is finished, and you have plenty of machinery, that this iron hill will astonish you when you begin to open it up. There is a mine in Australia which crushed 66,000 tons last year of 1½ ounce stone, and they had to put it through a very expensive process, and had several treatments before they extracted the gold, but that company has returned the handsome sum of £300,000 in dividends. We have three blocks—the Medindie Hill, the Iron Duke, and the Iron Monarch—and I may say the Medindie Hill is an immense mass of iron from 150 to 200 feet wide, about 100 feet high, and it takes 30 acres in length to take in the whole extent. We pegged out 24 acres, and found afterwards, when the Government were making a proper survey, that we had left out six acres of the best of it. This was immediately secured, and although the Associated Company had to complete the purchase, the Coolgardie transferred the six with the rest in the claims, so that you hold 30 acres. You have millions of tons in these three blocks, and anyone who has been there will bear me out in that statement. If you only get an ounce to the ton, I am sure the result will be that the price the Association shares will go to will surprise you. I may say, in addition to these immense iron outcrops, there are splendid reefs running through the hills as well. On the Iron Duke an opencut of 622 feet has exposed three lodes, each yielding stone in which gold is visible to the naked eye. This cut had to be sunk 10 feet before any indication was given of existing lodes. The ordinary prospector would say, "You have no gold, you have only a sheep run;" in fact, we heard that time after time in Adelaide, and it used to discourage the shareholders. As I say, this cut had to be sunk 10 feet before any indication was given of existing lodes, showing clearly that these lodes might have remained undiscovered unless a large amount had been expended in shafts and crosscuts. Captain Oates in his report, referred to in the prospectus, took the average of his samples—40 or 50—from Medindie Hill, and was most careful in taking those samples. They gave results of from ½ ounce to 3 ounces to the ton, but I mentioned an ounce, as I wanted to be on the safe side. I did not want to come back in 12 or 18 months to hear you say, "You told us so and so, and you have not obtained that amount." I would rather come back and find that, instead of 1 ounce we have got 1½ or 2 ounces. This refers to the outcrop alone, and not to the reefs, which I believe will yield much more; I am simply referring to the vast deposits of iron. Now, gentlemen, on your property you have some splendid dams. On the Iron Monarch you have an immense dam which, when completed, is estimated to hold over 12,000,000 gallons of water. On the Medinde Hill you have another, and you have also one on the Iron Duke. All this work was done before you took over the property by the Coolgardie Company, so that really when you bought this lease you were buying property which had been developed to a very great extent. You really bought properties which were proved. There is no difficulty about wood: in fact, the wood was so thick at the side of the company's property that a new purser who went out there said he would go for a walk, and the result was that he lost himself, and the whole of the camp had to turn out to find him, and it was while seeking for him that one of the employees on the property picked up the 90 ounce nugget that I mentioned just now. About three miles distant from the property there is a splendid belt of trees; in fact, all the logs for the machinery have been cut. The wood goes to 2½ and 3 feet thick after being squared, so that there is no difficulty about timber. In some parts of Western Australia it has proved to be a great difficulty to obtain timber for machinery or shafts. We have steam sawmills for cutting the wood, we have a lime kiln started, and a brick kiln, and all these works are being carried on. It was impossible to get these there, and the only thing to do was to start them ourselves; in fact, when I was there in January, it was simply a hive of industry. With regard to the water question, that had been the trouble all through, but this company has joined the Great Boulder, and two of the colonial companies in bringing the water from the lake which is three and a-half miles distant from your claims. These lakes are a sort of depression in the country. They are not deep, but they extend perhaps 10 miles in a sort of pipeclay. When the water evaporates, fissures occur in the clay. When it rains there it generally comes down in a sort of tropical style, and rains very heavily. There is a rush of water, and the rain percolates below this clay. For two years that was the only supply of water there for all these mines, and the people drew all they required from these lakes. There were hundreds of condensers, and from these places they got the water. At the time of my visit there there was a considerable length of fresh water from 1 to 3 feet deep. Your company has joined others in putting down pumping plant on these mines, and we have secured large rights from the Government, so that you are now in a position to have plenty of water. The water has already been pumped into a dam, which is for the common use of the different companies, so that the Associated Company has got over the water difficulty. Your directors, I understand, have ordered a 10 head battery, and long before that battery is ready there will be thousands of tons of stone ready for it; in fact, there is any quantity of stone in sight, so that as soon as that machinery is erected you can look for dividends. When that machinery is erected there is nothing to prevent it.

A SHAREHOLDER: What property are you referring to?

Mr. BROOKMAN: I am alluding to the flotation of subsidiary blocks. I personally started the original syndicate, and I may say that I feel very much interested in the whole of the property. We think in Australia it is a great mistake to float off any block. Looking round the room, and seeing the gentlemen present, I think that the Associated Company are able to manage these blocks themselves. It is the greatest mistake to form a lot of small companies. It multiplies the expense, and by the time you pay for promotion and one thing and another, you will find that, instead of having a fine property, you will have it all split up. It would be far better to try, if possible—I do not know how the directors are mixed up in Australia, and, therefore, should not go into that; you know more about that than I do—I say it would be far better if you sold one block and stopped at that, and then went on with the others yourselves, I understand you have 35,000 shares unissued, and you can raise more capital if required. You will not want a large capital because the moment the battery starts it will more than pay the expenses necessary for the development of the whole lot of these claims. Take, for instance, the Great Boulder. It has been crushing for six weeks, and for a portion of that period the mill was only going about half time, on account of the water supply not being finished, though it is finished now. They have, however, got back £12,000 out of the ground, and I do not think they have spent more than that amount; £15,000 was the full amount of capital raised, so that in six weeks they have actually got back the whole of the money they have spent on the property. I am giving that simply as an illustration, and I think you will agree with me that it is a great mistake to float off these blocks. Take Lake View, in Adelaide. They have spent about £12,000 on that mine, and they have a splendid 10 head battery, with driving power for 20 more. They have stopped calls, and are now looking forward in two or three months to having regular dividends. I have put these facts before you, and I think you will agree with me that it will be far better to issue these unissued shares and take them up among yourselves. I am quite prepared to take up some of them. Later on, if you find it wise to push on developments, it may be better to issue some of these shares and take them up amongst yourselves, and keep the blocks. There is one thing I should like to say in conclusion, and that is this—you have appointed Captain Oates, and I can say without hesitation that you have the best man in Australia to manage your mine. (Applause.) He has been managing a mine up at Southern Cross with almost the same difficulties to contend against as we have, and he has been paying dividends on 8 dwt. ore, and I think that speaks volumes. (Applause.) I thank you for your patient hearing, and I shall be very glad to answer any questions. (Applause.)

After a brief discussion, the CHAIRMAN stated that Mr. Brookman had been appointed Chairman of the board of Australia so that the interests of the Associated shareholders would be throughly conserved. He then announced that a cablegram had been received from the mines during the progress of the meeting, and that it read as follows: "Captain Oates confirms that the developments of the mines fully justify the expectations which have been formed. The developments are opening up splendidly." (Applause.)

A cordial vote of thanks to the Chairman and Mr. Brookman terminated the proceedings.

DOLCOATH.

Liquidation agreed to.—The new company.

An extraordinary general meeting of shareholders in the Dolcoath was held at Camborne on Thursday. Mr. F. HARDY presided.

The CHAIRMAN stated that in pursuance of a resolution passed by the old Dolcoath Company, steps were taken to register the company, and that was the first meeting of the Dolcoath Mine adventurers as a registered company. The resolutions to be submitted that day were for the purpose of carrying out the objects set forth in the resolution of the 9th. They were formal, but necessary. The directors had gone thoroughly through the Articles of Association, and Mr. C. V. Thomas would be prepared to answer any questions in regard to them. The adventurers generally had thought well of the desirability of reconstruction, as was evidenced by the number of proxies sent in, which were within a few of the number sent for the last meeting. He moved: "That it is desirable to reconstruct this company, and that with a view thereto, the company be wound-up voluntarily, and that Walter Pike be, and hereby is, appointed liquidator for the purpose of such winding-up."

Mr. HEARD asked how long winding-up the old company would take.

Mr. C. V. THOMAS thought in three months the books would be closed. Being a liquidation, he did not think the making of returns to the Board of Trade could be escaped. He hoped to get a certificate of the incorporation of the company within three weeks.

Mr. HEARD supposed that in the meantime all the ramifications of the mine would be carried on as usual.

Mr. C. V. THOMAS replied in the affirmative, and said that from the date of the incorporation of the new company a new set of books would be opened.

Mr. HEARD pointed out that the future guidance of the company depended upon the Articles of Association, and that, therefore, the resolution down for consideration was of great importance. Before shareholders were bound, he thought they should have an opportunity of seeing the Articles of Association.

The CHAIRMAN said they were lengthy. But they were on the table and Mr. C. V. Thomas would be willing to answer any question whilst at the proper time they would be open for inspection.

Mr. HEARD said he had seen many Articles of Association that he could not recommend any body of shareholders to adopt. There were many good points in the Cost-book system he should like to see imitated in the Articles of Association. For one thing, he thought there should be frequent meetings.

The CHAIRMAN stated that such was the idea of the directors.

Mr. HEARD considered the local directors should be strengthened. That must not be a close mine, and he thought that with advantage the directorate might be increased. He had every confidence in the present directors, but Mr. Lanyon on that directorate would strengthen it immensely.

Mr. C. V. THOMAS said the Articles provided for the making-up of the accounts and holding a meeting twice a-year. It was thought there should be a meeting in February and another in August, and that as the accounts would come before each, that would be as much as could be done. He thought monthly statements would also be forwarded.

Mr. HEARD was of opinion that there should be a meeting more frequently than once in six months.

The CHAIRMAN stated that the Cornish and the London members were only too willing to have three meetings a year, but that there would be difficulties in making up the accounts so often.

Mr. J. H. HOLMAN supported the motion.

Mr. HEARD enquired whether the Chairman proposed to ask the shareholders to consent to Articles of Association they had never seen.

The CHAIRMAN: Yes.

Mr. HEARD, whilst having every confidence in the directors, said that he for one should refuse to sign a set of rules he had never seen.

Mr. J. WICKETT thought the majority of shareholders had every confidence in the committee, and he did not think the committee would ask them to sign what was not right and fair.

Mr. C. V. THOMAS said he might say that no remuneration was named in the Articles for the directors. It was left to the shareholders to say what they should have.

Mr. HEARD supposed the books of the company would be open to the shareholders, as they were under the Cost-book system.

Mr. C. V. THOMAS replied that there were certain company books all shareholders had a right to inspect under the Companies Acts. Then the Articles of Association stated that they might examine such others as the directors gave them power

to examine, or the company might in general meeting determine. It was thought best to leave that in the hands of the shareholders.

The motion was carried unanimously.

The CHAIRMAN moved, and Mr. J. H. HOLMAN seconded, "That the said liquidator be, and he is hereby authorised to consent to the registration of a new company, to be named 'The Dolcoath Mine (Limited),' with a Memorandum and Articles of Association, which have already been prepared with the privity and approval of the directors."

Mr. HEARD thought it a pity that they were asked to bind themselves by Articles of Association they had never seen.

The CHAIRMAN said the Articles were open for inspection, and there would be an opportunity to object when the motion came up for confirmation.

The motion was carried unanimously.

The CHAIRMAN moved:—

> That the draft agreement submitted to this meeting, and expressed to be made between this company and its liquidator of the one part, and the Dolcoath Mine (Limited) of the other part, be and the same is hereby approved, and that the said liquidator be and he is hereby authorised, pursuant to Section 161 of the Companies Act, 1862, to enter into an agreement with such new company (when incorporated) in the terms of the said draft, and also carry the same into effect.

Captain W. RABLING seconded, and the motion was carried.

Captain ARTHUR THOMAS said they had not drawn up the usual report, as that would be submitted in a few weeks, but probably the shareholders would like to know something about the mine. The mine at the bottom was looking considerably better. The 440 end was about 15 fathoms eastward of the shaft, and the lode had improved. It was of no very great value, but probably there was somet'.ing further standing northward. The winze in the 425, about 30 fathoms east of New East shaft, was down about 9 to 10 fathoms, and for 9 feet long and 6 feet wide it was worth £60 per fathom. The 425 end east was driven about 20 fathoms east of the winze going down below the old run, and that was worth £55 per fathom, having improved, the last report giving it as worth £30 per fathom. The 327 was another important point. The winze was down, and the end driven eastward 13 fathoms. Shortly they would communicate with the 352 crosscut. The lode maintained its value. A magnificent piece of ground would be holed in about a month. A pair of pumping engines had been purchased for the surface, which they thought would be everything required, and they intended providing new head-gear and sorting and picking floors. The general object was to be in a position to deal with a large quantity of stuff, and to work the whole as automatically as possible.

A TESTIMONIAL TO MESSRS. SAUNDERS AND STONEHAM.

A CEREMONY of a peculiarly interesting and graceful character, and forming an agreeable break in the dull monotony of company procedure, took place on Thursday, at the Cannon-street Hotel, when a number of friends assembled for the purpose of making a presentation of plate to Messrs. Saunders and Stoneham. The wide and general character of the movement which culminated thus successfully may be gathered from the list of the subscribers which we append:—G. M. Coralli, J. C. Ridge, Richard Jaques, Edith A. Jaques, Roland R. Jaques, J. E. Hall, E. G. Mullins, G. W. Brown, G. A. Phillips, G. H. Collins, A. O. Jones, Rev. A. R. W. Seton, Otto Strange, Burn and Berridge, Malcolm, Cooke, and Lemon, Samuel James, G. D. Cramond, J. W. F. Relph, T. Bartigan, T. A. Taylor, J. H. Finlayson, J. Bruce, A. Mitchell, T. Arthur Davis, J. D. Davy, J. W. Collins, Wm. Madden, Captain H. Hall, J. N. Kiep, G. Jarrett, J. Kirkwood, J. Tod Mercer, Mrs. Mason, Swinburne and Crocker, Harry E. Elin, T. H. Hutchison, R. V. Barrow, John Girdwood, Mr. and Mrs. N. Monkhouse, Sir Hugh C. Montgomery, Bart., Herbert C. Latt, H. V. Rockley, J. Marshall, Sir Charles Cranfurd, Bart., C. A. Barrett, A. Barrett, H. Parkes, B. Howell, E. Nops, H. Blackwell, jun., J. Le Feaver, C. H. Ommanney, J. Marlin, W. P. Forbes, E. F. Thorpe, Stoneham and Messenger, Herbert Moir, J. J. Wallis, G. W. Jeffrey, J. Berry White, C. J. Millar, Ford, Rhodes, and Ford, H. B. Spurling, R. J. Hoffmann, Owen Coleman, M.D., Percival Tibbs, H. Milner Willis, Wm. Dean, Wm. Niely, Robert Irvine, London and West Australian Syndicate (Limited), Hampton Gold Fields (Limited), F. A. Thompson, Lord Arthur Butler, Wm. Chisholm, W. H. Barker and Co., Sidney F. Herbage, B. Seimert, Rebecca Cope, Adelaide Bassano, John Ashby, Dyson Weston, L. G. Barber, Mc. D. Duffield, G. N. Bridgford, Sir Thos. Causton and Sons, H. J. Collier, Hardie and Turnbull, Rev. T. H. Stanmers, R. H. Lapage, Fraser and Chalmers, H. O. Stevenson, Derenburg and Co., "Anon.," Alexander Fraser, Harry Weber, Sir J. C. Dimsdale, A. T. Harvey, P. Buchler, J. Robertson, W. F. Orris, D. Willis, F. S. Barbour, G. Nevile Wyatt, G. M. Cracken, C. J. N. Barwell, D. J. Wilson, Thomas Noble, James Dicks, James Fair, T. A. Colls, W. Nunan, Mary S. Doyle, John Adamson, John Orton, M.D., "Anon.," J. T. Donaldson, John Rayner, James McBride, C. W. Bloomfield, W. R. Harvey, R. Frarey, A. Simond, "Anon.," S. D. Stoneham, A. H. Downes, F. W. Baker, William Crocker, Fourle and De Jongh.

The pieces of plate presented to the two gentlemen were similar in character and design, and were arranged on the same table, a centrepiece flanked by two candelabra standing at each end. As the sun fell through the window, shimmering upon the solid silver columns of the candelabra and the gracefully curved spirals tapering from the centrepieces, the choice of the testimonial committee was allowed by everyone to have been made with judgment and taste. In design the centrepieces were of the style associated with the Queen Anne period, and consisted each of a large middle basket to contain fruit and flowers, and eight smaller dishes—four oval and four round—joined to the foundation structure by movable arms. A feature in the make of the centrepiece was the provision for detaching four of the smaller dishes, to be placed at different points of the dining-table. The whole—and here the harmony and symmetry of the general design was most apparent—was mounted upon four handsome scroll supports, held together by shafts and festoons. To this delicacy of workmanship the massive solidity of the columnar candelabra stood out in bold relief. In the original plan of the piece, sockets for five lights were included; but four of the branches are detachable, leaving the central light alone. Messrs. Elkington and Co., of 22, Regent-street, whose services were put into requisition for supplying the plate, are to be congratulated upon the high character of workmanship they are able to command.

Lord ARTHUR BUTLER presided, and made the presentation.

The CHAIRMAN, who, on rising, was received with great applause, said: Gentlemen—I feel highly flattered at being asked to take the chair on this occasion, and though my duty in making this presentation to our friends, Messrs. Saunders and Stoneham, is a very pleasant one, I could have wished it had fallen to someone else to take my place, who could have done greater justice to it than I can. I am, however, encouraged to think that this is no public meeting to present an official testimonial, but simply a gathering of the personal friends of Messrs. Saunders and Stoneham, for the purpose of offering them a slight token of their appreciation, and the very fact that so numerous a gathering has assembled here to-day, in my opinion, speaks more eloquently than any words of mine could do. (Applause.) Gentlemen, it is easy enough to talk ill of a man behind his back, but a very much harder task to speak well of a man before his face—(laughter)—when, as in the present case, the unfortunate victim is condemned to sit and listen to his own praise, and has no chance of making his escape. (Laughter.) I will, however, promise that my remarks, though fragmentary, will be as short as possible, so that our friends will have the consolation of feeling that my remarks will have the merit of scarcity. It is pleasant to think that Messrs. Saunders and Stoneham, while so intimately associated together in business, are also intimately associated in private life, and I think it must be a satisfaction to them to feel that on the same day they are both presented with a token of esteem by the friends of both of them. (Applause.) What strikes me very much is the indomitable energy and the great ability with which Messrs. Saunders and Stoneham have pushed forward Western Australia. (Applause.) A comparatively short time ago Western Australia was, to most of us, only a mere geographical expression. Now, thanks in a great measure to their hard work and unceasing efforts, the mineral wealth of that country is an established fact and a new outlet for capital, and a new field for industrial and commercial enterprise has been created. Of hard work they have had an unlimited quantity. I have been astonished, myself, at the amount of labour Messrs. Saunders and Stoneham have got through, and without this capacity for hard work their efforts could not very well have been so successful as they have been. I do not suppose that there is in the City of London a gentleman, who during the past twelve months or so has been more occupied than Mr. Stoneham, and yet, in spite of this pressure of work, I have always found him ready at all times with a kindly word of advice. Mere energy and ability, however, though they may be very essential to success, are not, in my opinion, the only qualities necessary to ensure it; for had it not been for the high reputation for trustworthiness and integrity which these gentlemen possess, I do not think their efforts would have attained that success which has crowned them. (Applause.) I will not, however, detain you at any length, although the blushes I see on my friends' cheeks are very becoming—(laughter)—and I will come at once to the very pleasant purpose for which we are gathered here. Allow me, Mr. Saunders, to present you with this piece of plate as a mark of our sincere respect and admiration. We are sorry to hear that you are so soon to leave us, and we wish you a most pleasant and prosperous voyage and a very speedy return. (Applause.) We only hope that if you visit Coolgardie you will entirely escape the clutches of the female pioneers, who, I now see, have made a descent upon that place. (Laughter.) I hope, too, that the plate may be a token to your friends in Australia of the high esteem and regard in which you are held over here, while, at the same time, it may serve to remind you of your numerous friends and well-wishers in England. You, Mr. Stoneham, I am glad to say that we are not going to lose, and, in asking you to accept this presentation of plate, allow me to say that we hope it will be a token, not only to you but to all your family and descendants, of the very high place in the opinion and esteem of your friends, which your ability and hard work have won for you. (Applause.) Gentlemen, I thank you for the patience with which you have listened to my few remarks, and I am sure you will all join with me in cordially wishing Messrs. Saunders and Stoneham long life and a prosperous career. (Applause.)

Mr. SAUNDERS, who was received with loud cheers, said: My Lord and Gentlemen—or perhaps, I may say, friends. I must thank you heartily and sincerely for your very great kindness in presenting me with such a very handsome piece of plate. I shall always value it most exceedingly, and every time I look upon it I shall be reminded of the many kind faces I now see around me, and the kindness which has prompted you to organise this testimonial to my great friend, Mr. Stoneham, and myself. For Mr. Stoneham I will say nothing; he is present and will himself thank you. I thank you, my lord, very greatly for the flattering terms in which you have spoken of my humble efforts to advance the best interests of the mineral resources of Western Australia. When I first came over here, three years ago, fortunately I met my old friend, Mr. Stoneham, and he and I have done our best in every way for the development of the mineral resources of the colony. For some time we had very hard work to get anyone to believe in us. The Chairman has said that I have done very hard work. We certainly had to work hard and to incur a considerable expenditure of money before we could manage to make people believe in the colony, and, I think also, in ourselves. Gentlemen, I can, in conclusion, thank you sincerely and heartily for your great kindness in giving me this very handsome piece of plate, and I thank you, especially, my lord, for the kind manner in which you have made the presentation. (Applause.)

Mr. A. H. P. STONEHAM, who, on rising, was greeted with loud applause, said: My Lord and Gentlemen—It is very difficult for me to find words to express my gratitude for the magnificent gift you have presented to me, and for the kindly spirit which prompted it. I can assure you I am grateful for both, and shall preserve the gift as a lasting memento of your esteem. It is little more than a year ago when some of those I see present to-day assembled in this very room to take part in the proceedings of the first annual general meeting of the West Australian Gold Fields. (Applause.) At that time so little interest was taken in West Australia that it was very difficult indeed to get a quorum of shareholders. I am very glad to see amongst those here to-day some few who were present upon that occasion. I remember very well that when I went round to see the people, and ask them to come and attend the meeting, the extraordinary excuses were made for not coming. One said:—"I am so very slightly interested in the company that it will not be worth my while to trudge up those stairs in the Cannon-street Hotel, in order to attend the meeting. I would rather not come." Another man said he would prefer not to come. I pressed him, and after a little pressing he said:—"The fact of the matter is, I must be excused from coming. I don't mind risking my money, but I don't want my friends to think I am such a fool as to put my money into such an enterprise." (Laughter.) That gentleman is, I am glad to say, still a shareholder, and I think he entertains a very different opinion of West Australia to-day. I remember that when Mr. Saunders and I first began to ask a few friends to invest some small amounts we were stigmatised as lunatics and madmen, and some tried to persuade us not to spend our friends' money in such a distant and deplorably out-of-the-way place as Western Australia. We had a good deal of disappointment in trying to get people to come in. Amongst those I see here to-day there are some who have more faith and pluck, and I hope they have made more money than those half-hearted people who called us maniacs. Mr. Saunders and I, when we made our first compact in West Australia, promised each other that we would not invite any of our friends to venture any money in an enterprise which we were not willing to risk our own money in. To that decision we have kept—with good results, I hope, to many. We ran a big risk when we went into West Australia, not only of losing our own, but our friends' money; but also of losing the friendship of some of those people who are friends only when they are prosperous. I am delighted to think there are none of that sort here to-day. I hope I may regard you all as personal friends. (Applause.) It is not always possible to be right, gentlemen; but it is always possible to do right. It has always been our earnest endeavour to do what is right. We cannot command success; but we can always do our best to deserve it. (Hear, hear.) Gentlemen, I thank you very heartily for the kind manner in which you have carried out this presentation. I assure you I appreciate your kindness very much, and your good opinion very highly, and the memory of this afternoon will never pass from my mind. (Applause.)

The CHAIRMAN then said: Gentlemen—We are very much obliged for your attendance here to-day. I ought to say that the list of subscribers to the testimonial is by no means complete, for I understand that some 20 more names should have been added to it.

Mr. TAVENOR proposed, in cordial terms, a vote of thanks to the Chairman and the testimonial committee, remarking that Messrs. Saunders and Stoneham had given West Australian gold in exchange for English silver. (Laughter.)

Mr. FORBES seconded the resolution, which was put, and carried by acclamation.

The CHAIRMAN briefly acknowledged the compliment, and the proceedings were at an end.

It may be added that the testimonial committee was composed of Lord Arthur Butler and the following:—Messrs. L. G. Barber, M. J. Burn, J. J. Wallis, John Girdwood, and Alfred Barrett.

SIDE LIGHTS ON THE LAW:

Legal Jottings on Cases in the Courts, and on Questions affecting Mining, Railway, Financial, Industrial, and allied Interests.

BY A BARRISTER.

THE decision of the Court of Appeal delivered last Tuesday in the "one-man company case" has been, and will be, studied by many people besides those interested in company law. Now that the Companies Acts under which the principle of limited liability has been enjoyed by traders for upwards of thirty years, it would seem almost unnecessary to have it solemnly declared that the object of the legislature was not to enable a man to defeat his creditors, but that the legislature simply contemplated the encouragement of trade by enabling a comparatively small number of persons (not less than seven) to carry on business with a limited joint stock or capital, and without the risk of liability beyond the loss of such joint stock or capital. The misapplied ingenuity of Mr. Aron Salomon, or of his advisers, however, has been the means of enlightening the commercial world on a point which will prove of considerable interest to some companies we have heard of, and possibly to more creditors whose names may appear on their books.

MR. SALOMON was a leather merchant and export boot manufacturer of Whitechapel, and in 1892 formed a small company, which was duly registered under the Companies Acts, for the purpose of purchasing and carrying on his business. As everyone knows there must be seven individuals to form a company, who must sign the Memorandum and Articles of Association, and these were signed by Mr. Salomon, as one of the signatories, and his wife and family were the other six who took a £1 share each. The nominal capital of the company was £40,000 in £1 shares, each share held entitling to a vote. An agreement had previously been entered into between Mr. Salomon and a trustee for the intended company by which the trustee agreed to buy the goodwill, business premises, fixtures, effects, and stock-in-trade at prices mentioned, or at such modifications agreed on in cash shares and debentures. Mr. Salomon thereby acquired the absolute control of the voting power. At the first meeting of shareholders—that is, of the subscribers to the Memorandum—Mr. Salomon and his two sons were appointed the directors at salaries of £500 and £145 per annum each respectively. Subsequently £20,000 in shares was issued to Mr. Salomon, and debentures to the amount of £10,000 were issued to a Mr. Broderip, as security for £5000 lent to Mr. Salomon. Being unable to obtain repayment Mr. Broderip proceeded to get the company wound-up, and thereupon he was paid-up, and Mr. Salomon claimed to be entitled to the debentures as a first charge. The liquidator in the winding-up, however, impeached the validity of the debentures, and, moreover, claimed to have the agreement of sale to the company set aside, and to have £29,000 in cash received thereunder by Mr. Salomon repaid; or to have it declared that Mr. Salomon was bound to indemnify the company against its debts and liabilities on the ground that the company was really his business, carried on in its name. The company's liabilities were over £11,000 unsecured.

THE Court of Appeal have now declared that, although the idea is ingenious, it is illegitimate and not sanctioned by the legislature to form a company with six dummies in order to enable a seventh person to carry on business with limited liability, and that notwithstanding that the certificate of incorporation of such a company is valid so long as it is registered, yet the person whose business it really is is bound to indemnify the company, as the law does not permit a person so to defeat creditors.

IT should be noted that the Court has specially guarded this decision from involving or affecting the liability of a man simply because he happens to hold nearly all the shares in a company. The liability arises from the way the company is formed, and from its being a device to enable a man to carry on trade with limited liability, and to sweep off the company's assets by means of debentures in order to defeat the claims of those who have been incautious enough to trade with them without perceiving the trap laid for them. Lord Justice Lindley most properly observed, "until the law is changed such attempts as these ought to be defeated whenever they are brought to light. They do infinite mischief; they bring into discredit one of the most useful statutes of modern times by perverting its legitimate use, and by making it an instrument for cheating honest creditors."

Bonanza (Limited).

The London secretary notifies that he is now prepared to receive applications for share warrants to bearer. Forms of application and scale of fees may be had on application at London office, 120, Bishopsgate-street Within, E.C.

CORRESPONDENCE.

*** We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.*

LEAD AND ZINC MINING IN CARNARVONSHIRE.

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR,—I have read the articles of your Special Commissioner on "Gold Mining in Wales," which appeared in March and April, with great interest, and with a practical knowledge of the districts dealt with—viz., Dolgelly and Ogofau—extending over a period of 35 years, I can fully appreciate and endorse the major portion of the remarks made in his able and exhaustive articles.

But the object of the present letter is to bring to the notice of mining investors another district, not rich in the precious metals, but in lead and zinc ores, which only await the touch of the miner and smelter to be converted into its equivalent.

The mines of Carnarvonshire (worked chiefly in the Silurian formation) have a history dating back to the palmy days of the Potosi and Welsh Potosi Mines, and some of the mines in the Nant Bwlch-yr Lairn, worked by the then Sir John Wynne were veritable giants in their days in the production of lead ores. More recent workings were crowned with periods of success, but all the operations of the earlier days appear to have been confined to shallow mining along the outcrops, and obtaining round ore from the gravel and clay deposits formed by the wearing-down of the lodes by denudation. About 80 years ago a more systematic method of mining was introduced, and since then operations have been carried on at intervals with varying success; but it is only within the last 20 years that attention has been directed to blende mining.

During the inflated times of 1870 to 1875 numerous companies were formed, and mining directors had high times. Elevated situations, with splendid mountain scenery and bracing air to give a zest to luncheons and champagne, were selected. Shafts were sunk, engines and tall chimneys grew fast, and expensive machinery and coals were hauled up, and for a time all went well. Then came a time when the price of lead ore began to go down and the price of coals to go up, and it was found that, while Nature had done so much to lay open her stores of wealth by disclosing rich veins of ore at surface, scooping out the sides of the hills into hollows for adit levels, and terraces for the erection of dressing plant, with an easy gravitation to the railway, man had marred the whole by putting his engines on the top, to pull it out (to use a miner's phrase) by the hair of the head. Of course, Nature had a bad time of it; some said she played freaks, and if the ore was not where they planned it—well, it ought to be; they were right, and the old dame wrong. One mining celebrity said the ore did not hold down, although no one has ever yet gone down through the ground to see. Practical miners who hinted that this was a district for adit level mining were treated as if they had an empty upper storey; and some 10 or 12 years since, in reply to one of my letters in the Journal, in which I endeavoured to show that the Parc lode was the Champion lode of the district, a "Knowing One" wrote that, "it went staggering along to Aberllyn, and halfway down the hill, and then became lost in oblivion." For aught I know, that "Knowing One" may be oblivious to all things by this time, but the lode stands out in strength in a magnificent bunch of zinc ore 16 to 18 feet wide, and numerous other points are open to inspection, that even with the low prices now ruling can be profitably worked with modern appliances, of which I can give to the most sceptical mind ocular demonstration, if such individual will give me a call here.

I could name numerous mines, both here, and in Cardiganshire, only requiring to be brought up to date in method of working to become safe and lucrative investments at all times, despite the low prices for minerals, but my time is too fully occupied to attend to it. If, however, your "Special Commissioner" could only be brought to give this district his attention, and let the mining public have the benefit of his able pen, I feel confident it will be most highly appreciated, and lead to better things.—Yours faithfully, CHARLES KNEEBONE.

Llanrwst, May 29.

LEAD MINING IN FLINTSHIRE.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—Many of the numerous readers of your widely-circulated Journal who are familiar with the mines of the above-mentioned county, will be pleased to hear that there are many evident signs of an early revival of operations in several of the largest mines in the famous Halkyn Mountain and Holywell districts.

The recent improvements in the price of lead and silver have had an exciting influence on the lessees of several of the oldest mines in the county, and the services of Mr. Edmund Spargo, M.E., F.G.S., the well-known mining expert, have lately been called into requisition in two or three instances.

The amalgamation of the Sir Edward, Pen-y-Ball, and the Picton setts (belonging to Messrs. Hughes and Hughes, solicitors, Flint), at the instigation of Major Balfour, on whose behalf Mr. Spargo has this week made a thorough examination, and detailed report of the combined mineral areas referred to have now been definitely effected, and a Northern syndicate is being instituted to acquire and develop the mines comprised in the group, on a scale of operation commensurate with their merits. These mines are centred round the Pen-y-Ball hill, immediately above and south of the town of Holywell.

The Rev. David Jones, the Rector of Brynford, has also availed himself of the services of Mr. Spargo to examine and report fully upon the several setts of which he is, as lessee, the owner. This gentleman has for many years been one of the most substantial supporters of the mining interests of the district, and has devoted thereto both time and capital, with a determination worthy of every success. The indefatigable efforts of the Rector to keep the mining interest of his parish alive, and afford employment to at least a considerable number of the mining community of the district during the long spell of depression they have passed through, is highly appreciated, and everyone wishes him the success he deserves. OBSERVER.

THE OTTOS KOPJE DIAMOND MINES (LIMITED).

TO THE EDITOR OF "THE MINING JOURNAL."

DEAR SIR,—I am instructed by my directors to request your publication of the following in your esteemed periodical:—According to Mr. Lisle's cable of 29th inst, the tailings still prove troublesome, and the crushing roller is not yet adjusted. It is, however, satisfactory that in spite of these impediments, which prevent the necessary preparation of the ground for sorting, at the last trial of 570 loads 2 carats per 100 loads were recovered. In the various trials that have recently taken place, over 70 carats have been obtained.—Yours faithfully,

THOS. CARR, Secretary.

110, *Cannon-street, E.C., May 30.*

VICTORIAN GOLD MINING.

By THOMAS CORNISH, M.A.I.M.E., Author of "Our Gold Supply," &c.

THE injury created by the initiating of the "frontage system" as a mining law would be difficult to estimate, because incalculable. It took many years to trace the course of the Main Golden Point lead under the plateau, as it proved so circuitous. This the Band of Hope Company, registered for a great length on this lead, found after ten or twelve years' work, in sinking a shaft at much labour and expense. It was ultimately proved to be on another lead altogether; while the lead for which they were registered, instead of going west, as they hoped, had taken a sudden turn, and gone south, leaving the shaft a mile away from the Golden Point lead, which was being worked in blissful ignorance by the Extended Company registered for claims on the Redan lead. This lead had no existence at this point, having become absorbed in Golden Point lead, which carried priority after junctions. When it became suspected that the Extended Company was working the rich gutter that should have belonged to the Band of Hope Company, the law was set in motion to prove their rights. The Extended was a co-operative company of 80 shareholders, who, having paid dividends of about £3000 per share out of the gold from a lead they were not registered for, refused to acknowledge any other rights but their own as being in possession, and, as money was plentiful, defended themselves against the Band of Hope Company, who claimed the right of sweeping all other companies out of the lines of their parallels south or west of their datum peg.

This monstrous doctrine aroused the enmity of other companies, and a bold stand was made against the swallowing propensity of the Band of Hope Company. Lower down the plateau other companies became similarly involved in disputes until the whole place was entangled in a network of lawsuits, with no possibility of the law courts being able to decide the rights of parties, because the boundaries of claims, and the length and course of the leads, could not possibly be determined until they were worked out, or nearly so. The whole system (as I had contended) proved to be utterly impracticable, "a delusion and a snare; it lulled people into a fancied security of tenure of titles which dearly-bought experience proved to be wholly delusive."

Time, money, and opportunity were wasted in endeavouring to prove an imaginary title into absolute fact, by the slow process of law, until the various parties concerned were wearied and disgusted; when common sense had to be brought to bear upon the matter. Compromises were effected and amalgamations formed to settle the malignant feeling that had been engendered by years of law, and the mines were afterwards worked in a more harmonious and profitable way. I foresaw the difficulties that were sure to arise on the working of the "frontage system" and exposed the absurdities of the measure; it could not be amended, and the futile attempts to do so were miserable failures. It was at last allowed to die from sheer exhaustion and neglect, and its authors ignominiously abandoned it.

I have drawn attention to the failure of the "frontage system" because the law in other countries has been, and is being, formed on the basis of the discoverer of a quartz lode being allowed to follow its dip wherever it goes, even if into another man's claim duly registered in the vicinity. This has proved a great source of trouble in the Western States of America, and will do so in any place wherever it is adopted. All mining claims should be definite, absolute, and distinct; let men exercise their judgment in taking up an area of ground and abide by it.

At the time the disputes about titles were so involved, I proposed a solution of the difficulty by an amalgamation of the mines then in litigation, and getting Parliament to grant a special lease for the whole area in dispute, about three miles by one and a-half mile from Sturt-street to the Bonthaw Estate This would have given a definite mining title to a large area of rich auriferous country, then producing much gold, the output from this ground alone being about £6,000,000 sterling, probably much more; the calls paid by the various companies for development were about £500,000, and the dividends repaid about £2,500,000 sterling. Could this area of splendid auriferous ground have been worked under one organisation, as I desired and proposed, the profits would have been much greater from the alluvial leads, while the quartz lodes since proved payable to a depth of 2000 feet would long since have been systematically developed. The alluviums in the main lead, and the tributaries were enriched by the disintegration of the various quartz lodes proved running north and south for many miles through this belt of country. Thus there are the Star of the East lode, the Guiding Star, the Prince of Wales lodes now, and for years past, successfully worked. The Star of the East lode now working by the Band and Albion Consols, the Band and Barton, the Sir Henry Loch, the Star of the East, and South Star Companies, for about 1½ mile in length down to depths from 1000 to 2000 feet, and from which profits of nearly one million sterling have been paid, is sufficiently encouraging, or should be, to induce capitalists to systematically develop the parallel lodes to the west with all the south and north continuations, of which there are many miles of country to explore.

Although to the westward there is a large area of auriferous country traversed by the alluvial leads from the Hadden, Smythesdale, and Carngham gold fields, the expense of proving them has hitherto been too great for local enterprise without some aid for drainage of water. Nearly the whole of the Ballarat plateau is occupied by the following companies:—The Band and Albion Consols, the New Kohinoor, the Star of the East, the South Star, the Northern Star, the North Plateau, the Central Plateau, the Sebastopol Plateau, the South Plateau, and the Prince of Wales, and Bonthaw. The entire area, about 3300 acres, the extent of alluvial ground which produced nearly £6,000,000 sterling, was only 230 acres; the wash dirt averaged about 4 feet 6 inches in thickness. Seven lodes traverse the plateau, and, allowing three miles on each line, would give 21 miles of quartz lodes to develope in this section, and as the belts of lodes on East and West Ballarat have been proved for over 10 miles in length, some idea may be formed of the vast area of ground there is yet for working.

In the Buninyong Estate of 882 acres, which is situate on the south continuation of a belt of lodes running through Ballarat East, and contains a portion of the main alluvial lead from the plateau, has within its area some 3 miles of unworked gutters, and six quartz lodes averaging over a mile in length each, which will take generations to work. This estate, when in work over 20 years since, produced gold value over £349,000, and paid in dividends over £140,000, which proves the value of the alluvial deposits on the estate. The Dezoza and other quartz mines north of the estate have successfully proved the value of the lodes traversing it north and south. A great alluvial level system, as yet but scarcely touched, stretches away to the west and north of Ballarat. A dividing ridge of schistose formation underground, as also on the present surface, has thrown off the underground and surface systems of drainage north and south. The leads going south have been well worked for about 10 miles, but the vast extent of country to the west and north covered with basalt, contains many scores of miles to be developed, and, as yet, but little work done. A few leads from off the western slopes of the ranges to the north of Ballarat, towards Creswick, have been worked, but not with the same success as the leads on the south. These include the Dead Horse, the Britannia, Sulky Gully, and others known as the Midas group. From the expressed opinions of the best-known authorities, and from the bores and trends of leads, as shown in a specially-prepared plan by Mr. J. Lynch, jun., Ballarat, and the evidence given before a Royal Commission, show conclusively that there is a great future for the extensive and profitable development of the alluvial leads and quartz lodes in and around Ballarat.

The Royal Commission appointed a few years since gathered some very important information as to the Ballarat western lead systems, which in my next article I shall more definitely allude to.

DEVELOPMENT OF THE COAL AND IRON INDUSTRIES IN SOUTH RUSSIA.

M. PILLEZ, on his return from a journey in Russia, has communicated to the Société de l'Industrie Minérale some notes on the coal and iron industries, from which the following particulars are taken:—The Donetz coal field, the most extensive of any in Europe, having an area of 9225 square miles, contains immense mineral wealth, consisting of every description of coal, from anthracite to the flaming variety.

Up to 1870 there were no ironworks in the Donetz district that did not belong to the Government, who had endeavoured to found works at Petrovsk and Lissitchansk, but without success; though, from 1796, a single establishment, that of Lougansk, for making war material—struggled through a century against the most varied fortunes, and was closed in 1887. In 1869-70, an Englishman, John Hughes, put up two blast-furnaces at Youzowo; and the Russian, Pastoukof, constructed a blast-furnace, to be fired by anthracite, near the Souline Station of the Vorontche-Rostof Railway. The two works above mentioned smelted ores from their immediate neighbourhood, containing on an average 45 per cent of iron. The production of pig-iron was about 41,800 tons, this state of things continuing until 1885.

It should be mentioned that a Frenchman, M. Le Play, mining engineer, studied the Donetz region so early as 1837, and then drew the attention of the industrial world to numerous coal deposits that he had discovered.

In 1883, the Katharine Railway was begun for connecting the Donetz coal field with the Krivoi-Rog iron mines; and at the same time, the Government increased the import dues on pig-iron from about 10s to 30s per ton. In 1887, a further increase of duty brought up the import dues to £3 per ton; and it is under the influence of this new state of things that fresh iron-works were put up in 1885 and 1886. The Briansk company founded works in the Government of Orel, Central Russia, for rolling rails from pig-iron, as the duty was then moderate. At Warsaw also, the Dnieper Company founded works for turning out rails and steel made from foreign pig. Under the influence of the increased Customs dues about 1885-6, and the development of railways, the Briansk Company built two blast-furnaces, now called the Alexandros Works, at Ekaterinoslav, on the Dnieper between the Donetz coal field, and the Krivoi-Rog iron mines. At the same time the Warsaw company put up two new blast-furnaces at what are now called the Kamenskoe Works, fourteen miles from Ekaterinoslav, in connection with the Cockerill Company of Seraing, Belgium.

During the last few years the Hughes and two other works above named have greatly increased, and the Pastoukof establishment, which was idle for a long time, resumed working. In 1893 the Huta-Bankova Company at Dumbrova, in Russian Poland, founded the Donetz Ironworks at Droujkofka, to the north of the coal field near Konstantinovka, on the Karkhof Railway, where there is already one, and there will soon be two blast-furnaces. There are, moreover, two blast-furnaces, one belonging to the Krafte Company at Kremenchouk, on the Dnieper, and another lately blown in at Krivoi-Rog.

To sum up, in 1885 there were in South Russia three blast-furnaces turning out 41,800 tons of pig-iron, and in 1894 20 furnaces turning out about 500,000 tons, so that in eight years the out-turn has increased more than tenfold. These blast-furnaces are thus distributed:—Hughes Works, 5; Briansk Works, 5; Dnieper (Warsaw), 4; Krivoi-Rog Works, 1; Pastoukof Works, 2; Droujkofka Works, 2; and Krafte Works, 1: total, 20.

These 20 blast-furnaces, which for the most part smelt Krivoi-Rog ores containing from 60 to 65 per cent. of iron, with a smaller proportion of other ores containing from 40 to 45 per cent., and manganese ores obtained from Nicopol on the Dnieper, turn out an average of 70 tons per furnace every 24 hours. All the pig-iron produced is worked up on the spot into rails, merchant iron, steel, and various finished products; and the quality of coal consumed has exerted great influence on the rapid development of the Donetz coal field. The following figures show the increased output in tons of coal and anthracite:—

	Coal.	Anthracite.	Total.
1870.....	43,800 ..	266,950 ..	310,750
1880.....	951,000 ..	487,000 ..	1,438,000
1885.....	1,372,000 ..	543,000 ..	1,915,000
1893.....	3,152,000 ..	672,000 ..	3,824,000

It will be seen by the above that between 1885, when an impetus was given to the iron manufacture, and 1893, the output of coal was more than doubled; the production of anthracite, however, does not appear to have much increased, as the demand for this class of fuel is limited. It is natural to suppose that the manufacture of coke should also have largely increased during the last few years. Only a short time ago it was made in open ovens on the Shauenburg system, but many closed ovens, called Belgian, of various types, are now being built. About 900 of these, and others, will be put up for superseding the open ovens now existing, but of which no more will be constructed. Moreover, the production of pig-iron is only in its infancy in this immense undeveloped country, where the Government is anxious to utilise the great mineral wealth at command. —*Journal of the Society of Arts.*

— THE PACCHA AND JAZPAMPA NITRATE COMPANY, (LIMITED) has declared a second dividend for the year 1894 of 4 per cent being four shillings per share, less tax (making with the dividend already paid 9 per cent for the year).

RAND RHODESIA EXPLORING COMPANY (LIMITED) and RAND WESTERN SYNDICATE (LIMITED).—The offices have been removed to 123, Bishopsgate-street Within, E.C.

LATEST FROM THE MINES.

CABLEGRAMS AND TELEGRAMS.

ALADDIN'S LAMP.—The following cablegram has been received from the mines:—"Four weeks crushing, 413 tons of ore have been crushed yielding 1250 ounces of gold. The ball mill and the 10 stamp mill have worked continuously during the month. No payable ore has yet been found on the 600 feet level."

AUSTIN GOLD.—The following cable from the mines is to hand:—"Crushed 190 (tons) 130 ounces. Tailings assay 30 grains." "We have appointed Williams mining manager."

ASIA MINOR.—Production for April, 127 tons silver-lead ore.

BLACKETT'S CLAIM.—Cable received from Mr. Leech, the manager, dated Coolgardie, May 29: "From the main shaft, crosscut is in 28 feet. The present width of quartz is 11 feet. We have so far not met with the footwall. The lode looks exceedingly promising.—South shaft. have driven upon the vein a distance of 8 feet. The vein has now widened out to 5 feet. The prospects generally continue to improve."

BONNIE DUNDEE.—The directors have received the following cablegram from Charters Towers:—"New shaft (underlie on Victory reef) No. 1 level north have driven 45 feet. The reef is 15 inches thick, worth 1 ounce per ton. No. 1 level south have driven 35 feet. The reef is 12 inches thick, worth 1 ounce per ton.—Tribute, No. 5 lease. We are laying down a skiproad in the old shaft. The tribute is looking well."

DON PEDRO.—A telegram, dated Mariana, May 27, states:—"Resumed level south from 50 fathom crosscut, also rise from 50 fathom crosscut towards the underlie lode."

ELKORN.—Bullion produced in the mill for the week ending May 25, 9900 ounces.

EL CALLAO.—Messrs. Baring Brothers and Co. (Limited) have received the following telegram from El Callao Mine:—"El Callo remittance for the month 576-600 ounces, La Colombia, 1726-1750 ounces.

EMERALD (REWARD). —The directors have received a cablegram from their manager as follows:—"Cleaned up 18th May, 304 tons 276 ounces."

GOLCONDA.—The secretary of the company has just received the following cablegram from Mr. Alexander Benson, the manager, dated Cue, May 29: "Battery running most satisfactorily during the day shift; dam holding up very well indeed. The main shaft has been sunk to a depth of 120 feet."

HOLCOMB VALLEY.—In reply to enquiries from the directors the manager cables as follows:—"Cut made 250 yards. Shovel doing 350 cubic yards per day. Amalgamator to start work next week. Have sent full particulars by mail, with photographs."

HARRIETVILLE.—The directors have received the following telegram, dated May 28, from Mr. T. G. Davey:—"Returns of concentrates, 25 tons 74 ounces; copper plates, 35 ounces."

JOHANNESBURG PIONEER.—Output for April, 1080 ounces of gold.

LINDSAY'S GOLD MINES.—The following cable has been received from the local board dated May 27:—"Cleland cables stopes are improving. Have struck rich ore in the 16 feet shaft, rich ore going down."

MOSMAN.—The directors have received the following cablegram from Charters Towers:—"Have crushed 150 tons of quartz from the Wyndham shaft for 595 ounces of gold and 146 tons of quartz from the North Australian shaft for 235 ounces. Have shipped 840 ounces by the s.s. *Duke of Devonshire*. The approximate value of the above is £2875.

MOUNT MORGAN.—The directors have received the following telegram from the head office, Rockhampton:—"We pay £25,000 on June 1, being dividend of 6d. per share (free of dividend tax) for the month of May."

NEW CRŒSUS.—The following cable has been received:—"The 60 stamp battery started on May 29, and the new machinery is working well."

NEW PINOS ALTOS.—Bullion shipped for five weeks ended May 18, $85,000; expenses, $42,000.

NEW QUEEN.—The directors have received the following cablegram, dated Charters Towers, May 25, giving result of crushing for past fortnight:—"255 tons, yielding 497 ounces gold. Have shipped same per *Duke of Devonshire*. Have drawn on you for £900."

NEW ARISTON.—Crushing for April: "Battery running 26 days 16 hours, tons crushed 1330, yield 257½ ounces.—Cyanide. Tailings treated 950 tons, yield 506½ ounces. Total 763¾ ounces. Estimated profit £500."

ORIENT.—Cable advices dated Cairns, Queensland, May 30, state that driving has been continued, the mine is looking well, and good progress is being made with the carriage of the battery.

ORITA.—The directors have received the following cablegram from their superintendent relating to run No 85:—"We have cleaned up £500; the profit on which is £200."

PAHANG CORPORATION.—The directors advise receipt of cablegram announcing the output for the month of April as follows:—"In 14 days, of 24 hours each, 375 tons of stone were crushed, producing 20 tons 1 cwt. of black tin; 20 head of stamps running. Working costs, $8750." Official note:—The following information by mail, dated April 8, appears to account for the diminished output:—"The stopes over the back of No. 1 level below adit on Pollock's were finished during the past month, and owing to the deeper levels not being sufficiently opened up, we were not able to keep the stamps running full time, but I think we shall be able shortly to keep them going night and day. What with hard country and other unforeseen difficulties, we have been much longer getting into tin ground in the lower levels than we expected."

PAHANG CORPORATION.—The directors advise that the output of black tin for the month of February has now been sold—18 tons in Singapore, realising $6588·99, and the remaining 27½ tons in London, realising £1124 3s.

PILBARRA GOLD FIELDS.—The directors have received the following cablegram from Mr. Herbert P. Pearse, the company's manager in Western Australia:—"Queen; developments in the lower levels rich quartz; 100 feet deep, over 4 ounces per ton."

ST. JOHN DEL REY.—The following telegram has been received from Mr. Chalmers, dated May 24:—"Produce 10 days second division May 10,000 oitavas, equal to 1153 ounces troy; value, £3875; yield per ton 6·7 oitavas, ·7722 ounce troy.'"

WESTERN ANDES.—The directors have received advices dated April 7, stating that the profit for the month of March was £570.

— The ordinary general meeting of the BUFFELSDORN ESTATE AND GOLD MINING COMPANY (LIMITED) will be held at Johannesburg on June 13. The transfer-books will be closed from 1st to 13th June, both dates inclusive.

— The directors of the FRONTINO AND BOLIVIA have received advices from the mines by which they learn that the estimated profit for the month of March was £457 15s. 2d.

THE GLENROCK COMPANY (LIMITED).

PURCHASE OF THE PREMIER MINE.—PLAN OF FUTURE WORKING.

A CIRCULAR has been issued to the shareholders of the above company, from which we quote the following particulars:—"In their circular issued to the shareholders in the month of November last, the directors reported on the critical position of the four-sevenths interest then held by this company in the Premier Consolidated Gold Company, brought about by the great and unexpected difficulties arising from the heavy reduction in earnings from the Premier Mine, and consequent straining of the financial position, rendering the final call of 6d. per share upon this company's share capital necessary. At the time of the reconstruction of this company in the autumn of 1893, at the mandate of the shareholders, a liability of 1s. per share was created, and £5000 authorised to be advanced upon mortgage to the Premier Company. This was at the time considered ample for all requirements, as there was considerable ground for hope, on the basis of the returns then being made, and with the erection of additional stamping power at that time being provided for, that the ensuing year would have enabled the Premier Mine to earn a dividend. The falling-off in value of the ore bodies, and consequent low yield during the greater part of 1894, seriously affected the financial position, and the Premier Company exhausted its working capital and found itself embarrassed with the local debts amounting to £2100. Your directors were at this time approached by the Premier Company for further financial aid, and negotiations entered into, and carried on for some time—it being considered as equally fair to the Glenrock Company on the one side, and the Premier shareholders on the other, that the holders of Premier shares should be assessed by means of a reconstruction of that company with a liability of 2s. per share—and enquiries were sent to New Zealand to elicit how far the shareholders there would contribute towards the desired end. In the meantime the local creditors took legal steps to enforce their claims under New Zealand law, and applied to the sheriff to sell the Premier Mine, and the whole property was accordingly ordered to be put up for sale. The indications in the mine at this time were represented as being very good, and this company advanced a small amount secured on the returns, to enable some of the ore from the No. 3 shaft below the adit level—being the deepest point reached—to be extracted and crushed, with the result that 157 tons of ore taken from this part of the mine yielded 202 ounces of gold, out of which result the amount so advanced was repaid to this company. This return was considered very satisfactory, but your directors felt that at such a critical juncture in the affairs of the Premier, and having regard to its past history, it was highly desirable that a further independent report should be made on the Premier Mine and its workings, and to obtain such report the services of Mr. G. F. Hosking, a mining engineer of considerable repute in New Zealand, were secured, and he was sent from Auckland to make a thorough examination of the property. Mr. Hosking's report by cablegram was as follows:—'I have carefully examined the property. The lode carries gold in paying quantities. I am convinced that this will open up a valuable mine.' This opinion from a mining expert who had been so strongly recommended, and which fully endorsed the opinions of others already obtained as to the future capabilities of the Premier Mine, is considered to have such an important bearing on your material interests that a copy of the report is circulated herewith, and shareholders are asked to carefully study it, and form their own opinion of the property of which they are now sole owners. The shareholders will now understand that at the period of sale the position of affairs was as follows:—The Premier Company owed this company £5000, secured on a mortgage of the entire property. The Premier Company had further local liabilities in New Zealand amounting to close upon £3000, and was urgently soliciting further financial aid from this company to enable these liabilities to be paid, as also to ensure sufficient cash in hand to start the works again.

"Your directors, as already mentioned, had listened to the proposition that a reconstruction of the Premier Company should be carried out with a liability of 2s. per share, always provided that the New Zealand holders of Premier shares would contribute their quota; and, as very little time was left to complete this financial transaction before the date fixed for the public sale by auction of the entire property, application to the New Zealand shareholders was made by cablegram, when it was ascertained that no appreciable aid would be forthcoming from the local shareholders, and your directors had but two courses open—the first being to allow the mine to be sold for what it would fetch, and endeavour to obtain back part of the £5000 lent on mortgage; or, secondly, to wait until the Premier Mine should be sold and purchase the entire property on behalf of this company. As holders of the mortgage on the property, the Glenrock Company had a very much stronger position in bidding for this property than any outsider possessed, and your directors felt it would be a mistake to allow this advantage to be neglected, and the result has proved the accuracy of this reasoning, inasmuch as the property, on being publicly sold on February 13, was bought by this company's representative for a cash payment of £1200, with certain ulterior arrangements as to the payment of sundry premier liabilities amounting to about £1900, in addition to the £5000 advanced on mortgage. This property was not purchased without a strong element prevailing on the part of Mr. W. J. Farrell for the purpose of preventing the Glenrock Company acquiring the whole of the leases."

The directors then go on to state that a post-card was sent to each shareholder directly cable advice was received in London, notifying the purchase of the Premier Mine, and that they themselves were satisfied they had carried out the views of the shareholders in purchasing the property, which is over 100 acres in extent, and situated in the well-known Wakatipu gold field, a district which has been productive of some very rich mines. They then quoted references made to this gold field by the Hon. W. H. J. M. Larnach, the late Minister of Mines, who spoke very highly of the district. They then give *in extenso* the report of Mr. Hosking, as follows:—"In the high level adit, which has been driven a distance of 1559 feet from its mouth, the reef at the face of the drift is about a foot wide, and unproductive, but the country rock is here of a soft, kindly nature, which indicates close proximity to another shoot of auriferous ore, and as it is known that other quartz formations on the line of reef are ahead of this drive, it is advisable to push the drive forward as fast as possible. In this drive the possibilities are very great, as should another shoot of stone be found, it will be in virgin ground from where it is discovered to the surface. It can be operated on from the high level adit, low level adit, and from the bottom of the incline shaft simultaneously, thereby insuring a very large output of auriferous ore. Should a parallel shoot of auriferous ore be met of only equal value to No. 1, the property would be immensely increased in value, as all deadwork in drives and shafts will have been already constructed to work the No. 1 shoot. This work is now in progress, and any day may bring news that would be welcome to the shareholders, and considerably enhance the value of the property. There is, moreover, an excellent prospect from the Sunrise mine, when further opened up and developed, and the directors have this in view for flotation as a separate company. It will be obvious to all shareholders that, to give full value to the properties thus acquired further capital is requisite, and unless supported on your part in this matter, the directors may have to accept offers for the sale of the Premier Mine to other parties, who, now that attention is being directed to New Zealand mining, would finance the undertaking.

"Indian Estates.—The company still retains its property (about 5000 acres in extent) and negotiations have again recently been revived, by certain parties interested in the cultivation of the rhea fibre, for taking over a portion of the estate."

The directors afterwards give some particulars of their prospective holding of an interest in West Australian property, alluding to the fact that they have secured an interest in the Hampton Purchase Syndicate, which company, in December last year, paid a first interim dividend of 100 per cent., and last month a second interim dividend of 200 per cent., a further dividend of 300 per cent. being promised before long. Then again, the Glenrock Company has an interest in the Hampton Plains Estate; and it has acquired the right to prospect for gold and silver, and to take up claims over the freehold territory administered by the latter company in the Hampton Plains district of Western Australia, which is in the heart of the gold-bearing country, and within the proclaimed gold field of Coolgardie. The company's right of selection will comprise blocks of 50 acres of ore-bearing land within this area. In the event of the Glenrock Company working any of the claims, the Hampton Plains Estate will be entitled to one-fourth of the profits resulting from such working; and, in the event of the Glenrock forming other companies to purchase and work any of the claims, the Hampton Plains Estate will be entitled to one-fourth of the nominal capital of any companies so formed, such one-fourth to be paid entirely in fully-paid shares. The directors further anticipate having several properties placed under offer to them, and it is their desire to be in a position to reap full advantage of what is likely to accrue in this direction; so that they are now able to place before the shareholders the following programme for future working:—

(1) The further development of the Premier Mine in accordance with the recommendation of Mr. G. F. Hosking; (2) the opening up and development of the Sunrise Mine, with a view to its flotation as a separate company; (3) to provide a moderate amount of working capital to take advantage of openings offered through efforts that have been made by your directors for securing an interest in Western Australia. To carry out this programme it will be necessary to reconstruct this company on the following basis:—(1) A new company, to be called the Glenrock Consolidated (Limited) to be formed, with a nominal capital of 450,000 share of 10s. each, to take over all the property and assets of this company; (2) the shares to be issued under registered contract, two in the new company for one in this, with 8s. credited as paid up, the liability of 2s. to be called up as follows; 3d. per share on application, 3d. per share on allotment. Balance as and when required.

"Your directors could not address you earlier, as they were awaiting receipt of mail advices from New Zealand. These having been received, it is now possible to deal with the future of the company on a comprehensive scale, and successfully to accomplish the objects aimed at by means of reconstruction, and so place the new company in the strong financial position of having a working capital of £45,000 at command. The directors have communicated with some of the largest shareholders, and offers from influential quarters to take a large block of the new shares have already been received should existing shareholders not avail themselves of the opportunity of taking the shares in the first instance. The scheme and terms are disclosed in the notice, and the draft agreement for sale and purchase, which has been prepared and will be produced at the meeting, and can be seen at the offices of the company, together with proposed Articles and Memorandum of Association of the new company, and the agreement entered into between the Hampton Plains Estate (Limited), the Right Hon. Lord Castletown, Lord Arthur Butler, and D. S. Brigg and the Glenrock Company (Limited) for granting prospecting rights for gold and silver over portions of 216,000 acres of freehold land in Western Australia. The directors consider the success of the reconstruction is assured, and feel confident that the shares of the new company will attain a substantial value, and confirm the correctness of the step now advocated. The notice of the ordinary general meeting of the company has been sent. This will be followed by an extraordinary general meeting for the purpose of giving effect to the resolutions submitted herewith, and it is trusted that shareholders will, as far as possible, be present on this occasion, so that the proposed scheme may be thoroughly discussed, and the best course to be adopted decided on."

THE MINES OF ELBA.

By HERBERT SCOTT, Fellow of the Geological Society of Italy.

(Continued from page 623.)

Methods of Working.

AS will be easily imagined, very primitive methods of working and transport are in use at the mines. Attempts have been made from time to time to introduce labour-saving appliances, but owing to the fact that the Government of Italy has let the mines only on short leases since 1881 (when the thirty years' lease to the Counteressata ceased), no lessee has thought it worth while to go to any great expense in laying down plant, &c.

Since the detailed examination of the deposits was made in 1884, and the Government found that the days of the mines were numbered, they have discouraged any attempt to alter the existing state of things, in order to keep as many hands employed as possible, the island having no other important industry to support its people, with the solitary exception of vine-culture, and that unfortunately, through the ravages of the *Phylloxera*, is in a very bad state at present.

As all the deposits, with the exception of the workings of the Francesche and Vallone at Calamita, are found filling hollows on the mountain-side, the overburden being generally a few feet of loose earth, it follows, then, that the easiest method of getting at the mineral is by means of open-cast workings, which system has always been in use in the past, and is in use at the present time. In order to obtain the mineral the following plan is adopted:—

The miners make a cutting into the side of the hill, and excavate all the mineral found on that level. When this is exhausted they attack the mineral from another level lower down

the hill and work it out completely, the area of each level becoming less and less until the bed-rock is reached. The working face is always kept very much inclined, to avoid falls.

The presence of the so-called Bianchetto, or altered argillaceous schist, necessitates great care in working, and especially is this the case at Vigneria, where this Bianchetto occurs mixed up with the ore masses.

At Rio Albano, the chief workings at present in operation are named respectively Gratterina, Pistello, Grotta, and Puppaio. In past times Gratterina has produced a large quantity of ore, but difficulty is now found in working, owing to the large amount of overburden. Originally two cuttings were driven into the deposit at right angles, and, these being united, a tremendous opening has been made in the mountain side. (Analysis No. 1.)

Much ore is still being taken from this mine, but for some reason or another, which is not quite clear, the mineral is now being found in a pulverulent condition, instead of lumpy, as heretofore. (Analysis No. 2.)

Recent boring operations having proved the continuance of the bed of ore below Gratterina, some time ago a cutting was made about 50 feet lower down the hill, which has been very successful.

This ore is pure and very rich in iron, averaging about 65 per cent. In some places it contains a little arsenic, but with care this can be avoided and mineral of great purity got out.

At Pistello the ore was originally worked in a number of small holes, and after a storm the workings were flooded with water. It was, therefore, decided to make a cutting into the side of the deposit lower down the hillside, whereby the ore can be reached more easily and the water difficulty overcome. This mineral, too, is of splendid quality. (Analyses Nos. 3 and 4)

At Rio Albano some impure mineral is met with. The ore from the different workings has, therefore, to be carefully and regularly submitted to chemical examination. Owing to the results of analyses made by myself showing the presence of small quantities of impurities, many of the workings have been abandoned.

Generally speaking, phosphorus is found in limonite, but at Calendozio it is found not only in the limonite on the top of the mountain, but also in some apparently valuable specular ore containing magnetite exhibiting strong polarity. The phosphorus, however, changes the appearance of the ore, causing it to lose its beautiful lustre to some extent, and enabling it to be recognised by the practised eye.

I have tested the Calendozio ore at many different places where outcrops are to be seen, but all without exception contain some phosphorus. It is interesting to note that the arsenic which is incorporated in the ore of Rio Albano close by is not to be found in any mineral from Calendozio, whilst phosphorus is found at Rio Albano.

Phosphorus and arsenic are sometimes found together in the same mineral at Rio Albano, but fortunately only in a few well-defined places. All the workings where more than traces of these elements are found have been let severely alone since I made these analyses proving their whereabouts, with the result that now the Elban ore has regained its good name as a pure and rich ore.

Owing to frequent complaints in the spring of 1892 as to the phosphorus contents in some cargoes of Elban ore, an examination of the mines was made by Mr. Edward Riley, when the presence of phosphoric ore was located in the Calendozio district. The lessee of the mines, finding that the shipping of this ore was so disastrous for him, decided to engage a chemist for the mines.

Thus it was that in 1893 I was sent out to Elba by Mr. Riley to establish a laboratory at Rio Marina and act as chemist to the mines and ironworks of Follonica; and, thanks to the wise foresight of Signor Tonietti in stopping the excavation of this lower quality mineral, the Elban ore can to-day compare favourably with any other iron ore in the world.

The deposit of ore at Calendozio was thoroughly examined in 1884, and it was calculated that about 1,000,000 tons of ore were available for export. It cannot, however, be counted upon to provide any ore for export to foreign countries on account of its containing a little phosperous, so it will be gradually used up for the home market.

At Gratterina, Pistello, and other workings, drilling proved the thickness of ore to vary from 10 to 40 feet. From the figures given in 1881, and allowing for what has been excavated since, there are about 1,000,000 tons of ore excavated in these workings, and, in addition to this, I estimate that there are about 300,000 tons of refuse of the ancients which would be marketable on being washed. For the washing of this ore a small machine has been put up.

At Rio Albano, where the working face consists of mineral and overburden, the men generally work in gangs, and are paid 30 to 60 centesimi, about 2½d. to 5½d., for every cartful of mineral, and 6 to 10 centesimi, about ½d. to 1d., for every cartload of overburden excavated, and their daily earnings come to about 2s. 5d. The overburden amounts to about five-sixths of the total excavated. The ore is carried down to the two loading jetties at Rio Albano and Capo Peri, about 1100 yards distant, by horse-carts, the owners of which are paid per ton of ore carried to the beach, where it is piled up. At Rio Albano and every other mine, great care is exercised in keeping the ore as clean as possible. From the moment of extraction to the time the mineral is put on board the large steamers, it is handled many times, and at every handling men are stationed to pick out all earthy or doubtful-looking mineral. At Rio the two deposits at present worked are about the same distance from the sea as Rio Albano, and also about the same height—viz., 500 feet above sea-level.

The huge heaps of "gettato" are now getting worked out, and are found at the right and left of the valley. This small mineral carries 50 per cent. of metal previous to treatment in the washing machine, and after washing about 60 per cent. The shovel is sufficient to excavate it, as it is only very loosely piled up. It is taken in hand-carts and thrown down the side of the hill in five or six stops, necessitating its being handled six or seven times. At the foot of the hill it is fed into the Patouillet washing machine previously mentioned. This machine consists of a trough about 15 feet long and 6 feet wide, deeper at one end than the other. A shaft carrying the stirrers revolves in the centre, and the ore is thrown in at one end and water flows in at the other. As the ore is stirred up, it gradually finds its way to the deep end, where the water enters, whilst the water holding the lighter argillaceous matter in suspension passes out at the other end. A wheel carrying buckets lifts the washed ore into a shoot from whence it passes into the wagons (Analyses 5 and 6). The wagons run it down to the beach, where it is loaded into barges. Two of these machines are in daily use, and they wash about 75 tons of ore per day. They are driven by two stationary engines, the sea-water for washing being pumped up by two other engines. Coal brought from England is used for raising steam. Between the Fabbriche, or lowest working, and the Pozzo Fondi, or the highest, a large heap of ore is piled up, which is washed by a very primitive method from time to time, *i.e.*, when the reservoir at the top of the hill contains sufficient water. The method employed is as follows:—A pipe connected with the reservoir is opened, and the water rushes over the surface of the mineral. The miners are employed in diverting the channels made by the water as much as possible, and in throwing the ore into the rushing water. The lighter earthy matter and very finely-divided ore passes away into the sea, whilst the heavier pieces of ore are deposited at the foot of the heap, and is then transported to the beach on the backs of asses.

As at this mine there is no overburden to be removed, the miners excavate the ore and transport it to the beach for 2s. 6d. per ton, themselves employing the donkeys and the lads to drive them.

The men engaged in mining proper, that is, drilling, blasting, &c., earn about 2s. a day nett, and the men who shovel the "gettate" about 2s. 6d.

The higher deposits of Cavaccie, Sanquinaccio, and Rossetto are not worked at the present time, the ore from these deposits being inferior in quality. It is mostly limonite and hematite, mixed with argillaceous matter.

From calculations that have been made, it is estimated the Rio deposit originally contained 11,000,000 tons of ore, but there only exists about 600,000 tons in the deposits now worked, and 1,000,000 tons in the deposits not being worked. In addition to this, there are 400,000 tons of "gettate" available for washing purposes.

At Rosseto, on the top of the mountain, borings have proved the existence of a cap of limonite on the bedrock, and in that respect it differs from the limonite of Calendozio, where hematite and specular ore rest between itself and bedrock.

The analysis of the Rio ore shows it to be very pure and extremely rich, this applying alike to the heavy ore called Andante (Analysis, No. 7) and the washed mineral or Lavato. At Rosseto and other deposits, however, the ore is found somewhat less rich.

At Vigneria, near to the Rio Mine, the ore found differs little from the neighbouring mineral. The only working face is about 50 feet high, and it requires some care in working, as I said before, owing to the Bianchetto or altered schists found mixed up with it. The calculated quantity of ore still existing in the deposit is about 150,000 tons. The men work in gangs, as at Rio Albano, and earn so much for each cartload of ore and refuse. This mine is only about 66 feet above the level of the sea.

At Terra Nera, as usual, huge heaps of slag and ore refuse, more or less rich in iron, are everywhere to be seen. The greater part of the mineral is micaceous. Up to about a year ago Gallinaio was the only working at Terra Nera, but now, owing to a landslip of large dimensions, work has been commenced on a bed lying below the level of the sea. This supplies magnificent mineral, but the cost of excavation and pumping is rather heavy. (See analysis No. 9.) At the present time I estimate the quantity of ore present in these deposits at about 100,000 tons. Here, as at Rio Albano and Rio, the beach is covered with finely-divided iron ore, which might easily be mixed with the other ore for exportation. Only, however, at Rio is it collected, and there only because it is the deposit of the water from the washing-machine; it is called Pulletta, and carries 67 per cent. of iron.

At Capo Bianco, near here, exists a manganiferous iron ore deposit, estimated to contain about 100,000 tons, and which is fairly pure (Analysis No. 11). It is not being worked at the present moment, but small quantities of previously excavated ore are shipped to the ironworks at Follonica for smelting from time to time. At Calamita, as before mentioned, it is very difficult to estimate the quantity of ore in the deposit, the position in which it is placed in the ilvaitic augitic mass makes calculations under any circumstances unreliable. At Francesche, which is the largest working, one bed of hematite exists on the surface, and another and thicker one lies below about 66 feet of silicate of iron. This last bed could be profitably extracted by subterranean workings, but at present it is cleared of all the overburden and then excavated.

Higher up, on the top of the mountain, several very satisfactory workings are in operation, where the mineral is found quite near the surface. Here, also, is seen the only ancient refuse at Calamita. The magnetic ore is becoming quite a rarity, but when come across it is found to possess very high magnetic properties. The men keep many of the best pieces themselves and sell them to visitors, or else send them on to the mainland to be sold. Asses are used for bringing down the mineral to the beach, and an inclined plane and shoot is also employed. One calculation of the amount of ore at Calamita gives the amount at 1,700,000 tons. Calamita mineral is very pure; even the limonite, which is, however, limonite by origin, is free from phosphorus and arsenic, but sulphur is rather high (Analyses Nos. 9 and 10).

The loading of the ore into barges or "laccone" for shipping into steamers is done by means of the jetties, the men using hand-carts when necessary for the transportation. On the two piers used for shipping washed ore at Rio wagons are used, and a permanent way is laid down. The lighters sail or are towed out to the ship by steam launches, and after being secured alongside the steamer, the ore is transferred on board by hand, wicker-work baskets with two handles being used. Three stages are suspended from the side of the ship, on which men stand to pass the baskets up to the deck. The men employed in this work are mostly miners, who, when ships are loading, leave the mines for this most profitable work. There is no proper port, so that the loading and unloading is not carried on without danger, especially in winter. By this undoubtedly primitive method, in summer 1500 tons per day can be put on board; but in winter, when the days are short, 750 tons is considered good work. The men employed at the mines are all islanders, and fairly prosperous compared with the workmen of other parts of Italy. For the last three or four years no new men have been taken on, and very few boys are allowed to work there, as it is intended to reduce the number of hands employed as the quantity of ore diminishes, to avoid causing undue distress.

Many suggestions have been put forward from time to time with regard to building a port at Rio, laying down of railways, &c., for transport of mineral, building of ironworks on mainland or on the island, but none have ever passed the initial stage. During 1873, when the price of English pig iron was so high, a project was set on foot to put up blast-furnaces and let the mines for a long lease, but it was found that the mines were not so inexhaustible as was generally supposed, and as at the same time the price of English pig was falling, the scheme was not persevered with further.

When, in 1857, the Counteressata Syndicate took the mines for thirty years, the contract included several small ironworks, which the company were compelled to keep going during the term of the lease.

The first twenty years' working until 1871 resulted very unfavourably, the company owing about £104,000 (2½ million francs) to the Government for royalty. But from 1871 to 1881 the mines yielded a splendid profit, the company shipping over 2 million tons of mineral in these 10 years, against 1 million shipped in the previous twenty. It was during this long lease that the jetties were built and the washing-machines set to work. During the last 10 years of this lease over 110,000 tons were annually shipped to France at 11s. 6d. (14 francs) a ton, and in 1874, 40,000 were sent to England at 17s. 6d. (22 francs) a ton, the highest price ever received for Elba ore.

In 1873, in consequence of the company demanding higher prices for the mineral from home buyers than from foreigners, the Government imposed the obligation of reserving enough mineral to satisfy the wants of home buyers, and also to sell such mineral 10 per cent. lower than that paid by foreigners. In 1881, and again in 1885, the mines were leased for four years and three years respectively. In 1888 and 1890 the late lessee, Signor Tonietti, took over the mines on two years' leases, and in 1893 he took them on a five years' lease. Under the conditions of the present lease the lessee is obliged to keep two furnaces in blow at Follonica during the months from October to May, when living there is practicable.

All mineral shipped to Italy is only subjected to a royalty of 50 centimes a ton, and it must be sold at a price not higher than 4s. 9d. (5 francs per ton.)

The clause favouring Italian customers does not affect the exportation of the ore to any marked extent, the new furnaces in Italy not requiring more than 9000 tons per annum during the last decade.

Not more than 180,000 tons a year in all can be worked, and it must be taken from the mines in the following proportions:—

	Tons.
From Rio, Giove, and Vigneria	40,000
„ Rio Albano and Calendozio	50,000
„ Terra Nera and Calamita	30,000
Washed ore, Rio	60,000
Total	180,000

The lessee can, however, ship the ore when and how he likes, so that in one year, if he does not ship the quantity permissible, he may do it the following year, or at any time during the lease.

The royalty paid per ton (2200 lbs. avoirdupois) exported is as follows:—

Lavato	4s. 0d.
Andante from Rio Vigneria and Rio Albano	3 3
Calamita and Terra Nera	1 7½

It will be noticed that the royalty for Calamita and Terra Nera is less than one-half the others owing to the increased cost of working.

Caution-money, amounting to about £38,500 (one million lire), is deposited with the Government on taking over the mines. The lessee must provide a doctor for his workmen at Rio, and he must keep up a hospital for employees at the foundries of Follonica afflicted with fever. The Government has an office at Rio, and its representative (who is a qualified mining engineer), with his assistants, watch their interests both at the mines and also during the shipping of the ore. This official is allowed to visit all workshops, offices, &c., when and how he pleases.

Two assistants are kept for service when loading vessels to check the weight of ore in each lighter. These weights are calculated from displacement of water by gauges graduated fore and aft of the boat. This system, which has worked very well, was first applied in 1889 by my friend, Engineer Attilio Monticolo, late Government Engineer at the mines.

The ironworks of Follonica were originally laid down by the famous family of merchant princes, the Medici, better known as the Grand Dukes of Tuscany.

The works are situated 20 miles across the channel from Rio. Follonica is near to a swamp which is not drained, and in consequence it suffers severely from fever. It is said that all this part of Italy (like the Roman Campagna) was at one time well watered and drained, and very fertile. It is very hard to believe this when looking at the malarial poverty-stricken wilderness which it presents to-day, especially if the "Sirocco" wind happens to be blowing. Four furnaces exist, but only two are working. Water-power is used for driving the blowing-engines, hoists, &c., and the blast is heated by means of the old-fashioned pipe-stoves.

Two calcining kilns are used regularly, not because any water or carbon dioxide is to be driven off, but because the charcoal smalls can be used, and the mineral made more porous, and consequently more easily reducible in the furnace. (See analysis).

The ironworks cover many acres, but are worked on a very old-fashioned system. The pig-irons which I analysed, although protected by a heavy import duty, cannot compete with English pig delivered in Italy. The furnace charge to produce 100 tons pig is made up as follows:—

Mineral	173 tons
Limestone	17 „
Charcoal	110 „

From the diagram appended you will see that France was responsible for the impetus given to the Elban ore industry in 1851-82. About 40,000 tons per year were supplied to that country between 1852 and 1872, and from 1872 to 1881 the amount rose to over 100,000 tons per annum. From 1882 onwards the export of ore to France has been practically *nil*, this being due more than anything else to the strained commercial and political relations existing between the two countries.

England commenced buying in small quanties in 1856, but it was not until the prosperous time of 1871 that we took any large quantity. The maximum amount exported in one year was in 1880, when 204,800 tons were sold to English iron-masters.

Mushet, in a book published in 1840, speaking of the Elban ore, said that it would never be possible to ship it to England to compete with other ores. He mentions 22s. as being the lowest figure at which it could be put on the English market; and yet, thanks to the abnormally low freights between Elba and England, the ore is now sold at a very much lower figure.

From 1872 to 1880 the market price in England was as follows:—

	Per ton.
In 1872	20s. 0d.
„ 1873	25s. 6d.
„ 1874	28s. 0d.
„ 1879	22s. 6d.
„ 1880	20s. 8d.

The total exports for the last twenty-three years—viz., 1871 to 1894, are as follows:—

	Tons.
Exports to Italy	356,885
„ England	1,540,420
„ America	1,280,207
„ France	1,253,993
„ Germany	61,049

The leasing of the mine for short periods of two or three years has been found to be very detrimental to the interests of the Government. The lessee studies only how to get as much mineral as possible in the given time, and there have been instances of refuse being put over a first-class bed of unexcavated mineral.

The mines are leased to the person tendering the highest royalty per ton of ore excavated, a system of letting which leaves much to be desired. Although the mines are national property, the Government does not think it advisable to work them themselves, and in view of the present deplorable condition of the country, the likelihood of their doing so seems more remote than ever.

(To be continued.)

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LONDON: JUNE 1, 1895.

GELDENHUIS ESTATE AND GOLD.

THE shares of the Geldenhuis Estate and Gold Mining Company stand at the present moment at a considerable premium. Notwithstanding the favour with which the company is regarded in South Africa, we are doubtful whether the prospects justify this price. The company, at the present moment, appears to be turning the corner, for it has only just overcome the difficulties of the past. The annual meeting was held in South Africa at the beginning of May, under the presidency of Mr. W. H. ROGERS, who was unable to deliver an absolutely bright and encouraging speech, although he said a great deal sufficient to encourage holders to retain their interest. During the past year a very heavy outlay was incurred in completing the new works—that is, to equip the mine with a battery of 120 heavy stamps and a cyanide plant. For the purpose of providing the necessary money, 12,500 shares held in reserve were issued to the shareholders in May of last year, which provided the sum of £53,125. This amount, however, was found to be totally inadequate, and the directors were compelled to arrange with the Standard Bank for an overdraft of £100,263 11s. 3d. This must have been extremely disappointing to the shareholders, but they were somewhat assured by the subsequent announcement that more than this sum will be obtained by the sale of a small block of nine claims. These works were considered absolutely necessary, and in the future shareholders will reap the benefit. In estimating the future of the company we must, of course, take into consideration what this extra plant will be able to do. The Chairman announced that now the equipment of the mine is complete, the profits will amount to £150,000 per annum. This, of course, is a large sum, but, from what the manager says, it is not at all a sanguine estimate. The latter adds another £50,000, or about 90 per cent. upon the paid-up capital of the company. The company holds a large portion of ground to the north of the mynpacht; here it possesses 68 claims, and, as there has always been an impression that the extension of the Du Preez reef will be found in the northern portion of the property, this ground should become a very valuable asset. According to the Chairman, they are now going on merrily, and he thought the shareholders might look forward to a very favourable year. In his speech he solemnly remarked that the past year was not a brilliant or conspicuously successful one. The tonnage crushed increased from 98,141 tons to 106,828, but the yield of gold from the mill diminished from 48,034 ounces to 40,216 ounces, the average yield per ton dropping from 9·8 dwts. to 7·3 dwts. The cyanide plant returned a further 20,864 ounces of bullion from the 109,464 tons treated, and the total yield of gold, including concentrates, for last year was, therefore, 63,767 ounces, which realised £197,746 14s. 3d., as against £179,926 4s. 2d. for the previous year. The working expenses, however, greatly increased, rising from 21s. 11d. to 28s. 9d., or, deducting the cost of cyanide, to 24s. 9d. The effect of the increase in the costs was to reduce the profits for 1894 considerably below those of 1893, the total being £48,823 13s. 8d., compared with £69,718 4s. 9d., and, in consequence of this, dividends were reduced from 20 to 10 per cent. It cannot, therefore, be claimed that the past year was a very successful one. The mine, however, certainly shows an improvement, for the shafts have been continued, and several levels opened up, increasing the ore reserves from 126,943 tons to 159,958 tons. According to the manager's estimate, there is enough ore in sight to keep the 120 stamp mill going for 12 months; but, in the Chairman's opinion, the manager very much under-estimates the ore in the stopes. From 1888 to 1894, the yield of ore was at the rate of 12·55 dwts. per ton. For last year, with the cyanide working, it decreased to 11·84 dwts. per ton, but the Chairman explained that, necessarily, with a large mill, a great deal of ore went through which was really not payable. In future, this is to be obviated by having a sorting plant; so that shareholders may expect better results from this arrangement. In addition to this, during the last year they were passing through a poor zone; but when they get through this, there is every likelihood that the lower levels will be much richer. As a result of the year's operations, the directors, as stated above, were able to declare a dividend of only 10 per cent., absorbing £20,000 out of the profits of milling. Taking all things into consideration, and especially that the period of expenditure seems to be at an end, we think that there is every justification for looking to the future of the company with considerable hope. Notwithstanding their high price, the shares appear to be a good investment, as the Estate and Geldenhuis Gold Mining Company will, in future, in all likelihood, rank among the permanent dividend-payers of the Main Reef series.

NEW ECONOMIES IN GOLD MINING.

OF late years so much has been accomplished in the reduction of costs for extracting gold from refractory quartz, that one might begin to wonder whether the minimum of expense, and consequently of profitable content in ores, has not at length been reached. On the contrary, however, claims are made for the latest developments of the cyanide process which promise a more striking revolution in the economies of gold mining than any which has yet been accomplished. And these claims are justified, not by laboratory experiments, but by the results of actual mining work. For some time past the ore at the George and May Mine, Witwatersrand, instead of being crushed and amalgamated in a stamp battery, and afterwards treated by a solution of cyanide of potassium, has simply been roughly crushed in an ore-breaker and then conveyed direct to the cyanide plant. The cost of the crushing is only 3d. per ton. Thus, it is rendered possible to deal profitably with a low-grade ore, which otherwise would not pay for treatment. But it must not be assumed that the experience at the George and May mine is one of universal application. The ore dealt with under this system is an excessively friable, free milling banket, which requires a very much smaller degree of reduction than is needed with the bulk of quartz before it can be successfully treated by cyanide. Therefore, it would be a grave error to assume that the results quoted above can be repeated in the case of all low-grade ore. The majority of the South African ore consists of a conglomerate in which the ore-bearing portions are as hard as the barren portions. The whole of the rock must, therefore, be subjected to complete pulverisation, and the method adopted at the George and May would not apply. In the latter quartz the pebbles are worthless, and the gold is practically confined to the friable free-milling cementing matrix. Even quartz which apparently reproduces these characteristics may fail under the system of coarse crushing and direct cyaniding by reason of its chemical constituents. Allowing for these exceptions, however, there is no doubt that the successful experiments described have opened up an enormous amount of low-grade ore to profitable treatment. There are the vast riches of the Kimberley Reefs to be dealt with by some modification of the process, and it will probably be found that its use will probably open up new possibilities for the Kimberley district. Whether it is sufficient to crush only in an ore-breaker or to put the ore through the battery or rolls, the substitution of direct cyaniding for the present extraction by mercury must have a great effect in establishing the remunerative treatment of much ore at present impossible to treat at a profit.

DEVON GREAT CONSOLS.

ALL will allow that the directors of Devon Great Consols have every reason to be satisfied with the record of half a year's working which, in spite of the greatest difficulties, they were able to present to the shareholders at the general meeting on Tuesday last. It is obvious that a winter as severe as the one just experienced, and which worked such complete havoc at the mine, would have been a very presentable excuse for the omission to declare a dividend. But yet in a six months which is not only affected by the washing-away of the bridge, and the damage to the weir, but also by the unfortunate accident to Mr. BAWDEN, the purser, a dividend has been earned, which, although smaller than usual, is still to a very substantial sum. Now that mining in the West of England, under improved commercial conditions, is on the upward movement, there is no good purpose to be served by giving more than a passing glance at the darker side of the shield. But when the majority of the Devon and Cornish mines are not only for the moment out of the Dividend-paying List, but even making calls, there must be a certain pardonable pride in the presentation of an account which includes the payment of a dividend. If through a period of the most extraordinary stress of weather — of phenomenal floods, and equally phenomenal frosts, and of the unfortunate deprivation to the exec utive of the services of one of the leading and most valued members of the management—such a satisfactory result could be obtained, there can scarcely be any question that under more favourable circumstances a better report would be presented. With this company, as with others, an important particular in the casting of the horoscope is the late rise in the price of the commodities with which the company is concerned. A steady but continuous rise in the price of copper is itself a highly encouraging factor, and should produce beneficial results in the future.

Indications certainly argue favourably for the future of Devon Great Consols. The rise in the price of the commodities produced, as well as the leeway which has been made after the disastrous interval of storm and frost, are fairly reliable evidences that the returns will shortly be quite up to the level of the average, with a consequent recurrence to the dividends of the past. As bearing upon the estimate to be formed of the present, and the forecast to be made of the future of this company, Mr. SLOPER'S remarks, by reason of the uncompromising and almost antagonistic spirit in which they are uttered, have a certain well-defined value. When the counsel for the prosecution fails utterly to state a case, it may safely be inferred that there is none to be made. Whatever of an unpleasant nature can be discovered in the financial and working statements submitted in connection with the mine can hardly, by any possibility, escape the close scrutiny of Mr. SLOPER; and when his criticisms year after year amount to a tiresome reiteration of trivialities, the shareholders may leave the meetings with cheerful and contented minds. We are disposed, however, to question whether it would not be worth Mr. SLOPER'S while to enquire of himself if he has not already sufficiently aired his discovery of the fact that the mine depends for its revenues upon the arsenic produced. That the discovery was a great one, and that it redounds hugely to the credit of Mr. SLOPER'S introspective qualities of mind, we are willing to admit; but there comes a time when a matter of the kind is so firmly fixed into the minds of men that any repetition of it is a work of supererogation. If COLUMBUS had gone about month after month and year after year telling his friends that he had discovered America, a point would ultimately have been reached at which even courtesy and friendship could support the infliction no longer, and the great man would have been told in very pithy language, "Marry, CHRISTOPHER, but thou art a great bore!"

WAIHI SILVERTON EXTENDED.

IT is too early yet to form any conclusive opinion as to the prospects of the Waihi Silverton Extended Gold Company, the statutory meeting of which was held on Tuesday last. If, however, we were to form estimates simply upon the statements delivered at the meeting, and upon the reports made by the newly-appointed manager of the company, we should get quite enthusiastic, and say that the future was absolutely bright and full of encouragement. But it would be wise to put a discount upon these glowing and sanguine utterances. In the first place, it must be borne in mind that this company's property neighbours on the Waihi Gold Mining Company's mine, which, as we all know, is exceedingly rich, and the shares of which are regarded with much favour by the public. Nevertheless, this does not argue that the Waihi Silverton Mine will be equally as rich. Undoubtedly, the public look upon this new mine with considerable favour, for, according to the Chairman, applications were made for no less than 90,000 shares, but the directors had only 20,000 to allot. One of the first acts necessary at the formation of a company is the appointment of a capable and trustworthy manager. The directors seem to be confident that they have found such a person in Mr. H. H. ADAMS, whose character, we are told, is, on the other side, extremely satisfactory. Mr. ADAMS has already made a report upon the property, and from this no other conclusion can be formed than that it is very rich, and gives very high promise. Perhaps the most important statement he makes is, that after carefully examining the reefs and the country surrounding them, he is of opinion that they are simply a continuation of the great Martha lode in the Waihi Mine.

Then again, the reef called the Silverton, he says, is a fine body of ore. It is fully 12 feet wide, and, judging from the returns obtained in the past, and the gold-bearing veins he saw in the reef from wall to wall, in his opinion this reef will prove highly payable. It has already been worked for a distance of 264 feet in the Smithy level. Of course, it would not do to attempt to criticise Mr. ADAMS' statements; we must take them for what they are worth. All that can be done is to bear them fully in mind; to watch the company's career with interest, and to see if they are confirmed by future results. He recommends, amongst other things, the erection of a cyanide plant, his argument being that, "this process is really making a complete revolution in gold mining. "I am told," he says, "that in New Zealand the cyanide process has been of enormous influence in developing that colony as a gold mining region." We gather from the Chairman's remarks that Mr. ADAMS was in New Zealand when he was appointed manager. It may be, of course, that he has only been there a very short time, and that he has had but little practical experience of the cyanide process, and of its ability to treat New Zealand ores; but, assuming that he had been in the country even a short time, it is surprising that he should have seemed to have formed his opinion upon mere rumour; for he says that he is *told* that the process has been of enormous influence in New Zealand. As a matter of fact, it *has* had an influence, but not an enormous one. We, ourselves, naturally have great faith in this process, and we are fully convinced in our own minds that it will be found almost as valuable in New Zealand as it has been found on the Rand. It may be as well to say that Mr. ADAMS' statements have been fully confirmed by Mr. SPRATT, the consulting engineer of the Waihi Gold Mining Company; so that, altogether, we are encouraged to look to the future of this company with considerable hope.

NOTES AND COMMENTS.

THE Johannesburg *Star*, to hand by mail, gives some interesting and encouraging information respecting the Glencairn Mine, which, before the end of the year, it makes out, should be one of the model mines on the Rand, not only from a purely engineering point of view, but also with regard to economical considerations, generally. There are many points in the mine which give great promise, and from all accounts, the management is displaying considerable skill and intelligence in economising. The mill will shortly be enlarged to a power of 100 stamps, producing a return of something approaching 7000 ounces per month, and a profit very much above the £6000 or £7000 now being yielded. The cyanide plant will be enlarged as soon as the increased battery power has been provided, and a system of double treatment of the sands will be arranged similar to that lately adopted by the May Consolidated. The latter mine also appears to be entering now on a period of prosperity. It is a neighbour of the Glencairn, but it is of considerably greater extent. In the past the directors have had a keen struggle to keep their heads above water, but the period of stress now appears to be over, and the company is now well launched upon an assured and bright future. The amount of ore in the mine has been estimated at one and a-half million, and with an 80-stamp mill its life has been variously estimated at from 12 to 15 years.

AT the beginning of May the tenth half-yearly meeting of the Potchefstroom Exploration Gold Mining and Estate Company was held, the proceedings at which are invested with considerable interest in face of the sudden demand which a few weeks ago sprang up for the shares, especially in South Africa, on the report that the Buffelsdoorn reef had been struck. Nothing took place at the meeting which came up to general anticipations. The Chairman made no announcement which could unduly delight any person interested in the company. He prosaically and casually remarked that a prospector went down, and at once started work, with the result that he met with a reef which, to all appearance, looked well. Mr. Goldmann, one of the directors, and who is also the company's engineer, likewise visited the property, but this gentleman would not commit himself to saying that it was the Buffelsdoorn reef. All he would say was that they practically had the formation, and by continuing the shaft they might alight on the reef at any moment. Nevertheless, in spite of this uncertainty, the shares are far from being a bad investment. The financial position of the company is sound, and the assets valuable. According to the Chairman, the company has now entered upon a new stage in its history. Undoubtedly it has, but, notwithstanding that the prospects seem encouraging, the future is far from being assured.

THE Zeehan-Montana Company has not been in existence a very long time, but it already occupies a position which is undoubtedly envied by many companies more favourably regarded by the investing public. It possesses a property situated on the Mount Zeehan silver fields, Tasmania, and was formed as lately as the end of 1892. Already dividends of an encouraging amount have been paid. They have not been large, it is true; but still, they have been consistent, and, notwithstanding that the price of lead and silver has been depressed of late, it encourages us to look hopefully to the future. The third ordinary general meeting of the company was held on Tuesday last, at which an interesting statement was made by Mr. Griffith, one of the directors who has recently visited the property. He had a very hopeful and encouraging tale to unfold, the result being that those shareholders who attended the meeting were quite enthusiastic over the prospects of the company. In Mr. Craze they seem to have found a model manager—a gentleman who has justly earned the confidence of the directors. When Mr. Griffith was over there, Mr. Craze succeeded in finding a new lode, which has already yielded £780 of lead at a cost of £250. Another satisfactory feature this gentleman noticed at the mine was, that the three captains of the English mines were all working harmoniously together; from which he argued that this resulted in a great saving to the company. During the course of his speech, Mr. Griffith detailed to the shareholders some of the work it was necessary to do in order to properly develop the mine, and he assured those present, on his own authority, that when these developments were complete he anticipated that the mine would be in a position to return the shareholders a very handsome dividend.

NOTHING is more strikingly illustrative of the vast extent of our South African possessions than the huge grants of land that the directors of the Chartered Company are making from time to time to other companies, whose interests lie in the same quarter of the globe. It is of no uncommon occurrence to hear of a slice of the continent, whose extent would conveniently accommodate four or five of the smaller European countries being conceded by one stroke of the pen for the mere asking. But a few days ago it was stated from the chair at the meeting of a South African exploring company that 200,000 square miles of territory had been allotted on these easy terms to the directors, with no conditions more onerous put upon the gift than the spending of a few thousands in developments, such as would, of course, redound largely to the company's interests. The British Chartered Company of South Africa are certainly not actuated in their deeds by any pure spirit of philanthropy and it is, of course, easily apparent that there is an almost perfect harmony of interests between themselves and their concessionaires; but this consideration notwithstanding, such a wholesale method of slicing the territorial cake is peculiarly impressive to the inhabitants of a country that is certainly not overburdened with opportunities for internal expansion. A glance backward at the enormous rapidity with which the opening-up and civilising of Africa has proceeded is the most cogent reason that could possibly be adduced in support of the optimistic view of its future career.

THE feeling of despondency which the Londonderry fiasco, and the collapse of Cashman's Brilliant, created some time ago in the minds of the investing and speculating public is gradually being dispelled, and, once more, confidence is being restored. This is due, of course, entirely to the promising and gratifying results from those mines whose development is already considerably advanced. It is unnecessary now to dwell any further upon the failures of those two mines, or to reiterate the fact that their collapse came about in the natural order of things, and was actually foreseen by those capable of judging. We merely wish in this connection to draw the attention of our readers to the article which appears elsewhere, written by our correspondent, Mr. Brenton Symons, who this week gives a description of the effect these failures have had in Western Australia itself. Mr. Symons is a well-known and influential expert, and his opinion is deserving of serious study. He argues that, in spite of these failures, Western Australia is an exceedingly rich gold mining country, and that when facilities for transportation are afforded, and the mines sufficiently developed, the latter will repay the capital which is now being invested in them. Mr. Symons writes in a calm, judicial spirit, not at all in that sanguine tone which has characterised the utterances of many who profess to believe in the future of the country; and this, of course, makes his opinions all the more valuable and trustworthy. During the course of the next few weeks, we shall publish further articles from this gentleman's pen, dealing with the various gold fields of the colony.

THE Society of Arts, whose province it appears to be to afford conveniences for the discussion of subjects that might otherwise go begging for a suitable accommodation, has latterly devoted a great deal of attention to mining in its more scientific aspects. The Cantor Lectures on recent improvements in American metallurgy were by universal admission some of the most valuable contributions to the literature of the kind that have been put into the hands of the public for some time, and the paper by Professor Roberts-Austen, on the reduction of the rarer metals from their oxides, was on the same high level of ability and value. This budget of papers on metallurgy and kindred subjects was continued last week by Mr. Charleton whose paper was a fair sample of what the mining engineer is able to compass by a close and systematic pursuit and cultivation of one important branch of his art. The Society of Arts has done excellent and lasting work in its way, and its methods are of sufficient importance, and carried out in a sufficiently able manner, to make it tolerably certain that a suspension of them would create immediately a keenly-felt want in the higher industrial circles of London. We can only hope that the attention which the society is now giving to mining and metallurgy may be fruitful in its results, and that amidst the multitudinous subjects that are ever claiming its attention and its hospitality, there may still be left a blank which may be profitably occupied by the industry in which we are more particularly interested.

THE statement as to the inception of the enterprise, laid before the shareholders of the Cardiff Castle Gold Mines at the statutory meeting on Tuesday, exhibits one or two features that would appear to be of a satisfactory character, though tending, naturally, to show the high opinion entertained by the public of the property, rather than the ascertained value of the property itself. That the opinion of the mines obtaining at large is a good one is shown by the fact that the shares offered for public subscription were considerably over-applied for. To a certain extent the company appears to be free from an evil which frequently afflicts, and sometimes even wrecks, undertakings of the most promising kind; for a working capital of one-third of the whole capital of the company has been retained, so that the property should, at least, have a thoroughly successful trial given to it. The board have by no means remained with folded hands during the few months measuring the present history of the company. The property has been transferred, the machinery has been ordered, and an adequate representation has been arranged for in the colony on behalf of the company. Cables received from the locality of the mines show that development is proceeding vigorously, and up to the present with results that can hardly be regarded as other than encou-

raging. One important particular that transpired at the meeting was the announcement of the discovery of two additional reefs on the property.

INTERESTING comparisons of the Continental and English ironstone mining industries are to be found in the statistics lately published as to Continental competition in the iron and steel trades. The German production of cheap phosphoric ores has enormously increased of late, owing to a greater demand for steelmaking by the basic process. Between 1881 and 1893 the production rose from 7,573,000 tons to 11,457,000 tons. The average annual output per workman employed in and about the iron mines as a whole was 205 tons in 1881, and 329 tons in 1893, or an increase of 60 per cent. German ironstone prices, in consequence of this increased production, have so much cheapened, that whilst between 1878 and 1880 the ore cost of pig-iron varied from 22s. 6d. to 38s. 6d., the ore cost at the present time will probably not exceed 15s. to 20s. The ores of Alsace-Lorraine and Luxembourg cost only about 2s. per ton as an average at the mines; but it costs another 5s. or 7s. more to deliver them to the works. As to our own Cleveland district, the average selling price of ironstone over the last 15 years has varied from 4s. 4d. to 5s. 9d. at the furnaces. Largely owing to the more extended introduction of drilling machinery in English practice, the average number of tons produced per man employed per annum in Cleveland is now from 800 to 900 tons, or nearly three times as much as the average in Germany. Taking the seven years—1888 to 1894—it appears that the wages paid to coal miners in Great Britain were, on an average, at least 65 per cent. higher than those paid in the chief—the Dortmund—coal field of Germany. All the foregoing facts tell considerably in assisting German competition against British iron and steel in finished forms. The association admit that Germany is making headway, but seem to think there is no cause for alarm. They have sent commissioners across the Atlantic to enquire into the subject of American competition also,

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AMONG the large numbers of business men who are watching with interest the present vigorous initiation and appreciative reception of mining enterprises are the leading industrialists of British Guiana, who are not without strong hopes, founded to all appearance in a knowledge of the substantial value of their reefs, that their small but thriving colony may come in for a share of the general prosperity. At the same time one of the journalistic oracles of Georgetown gives a word of timely warning to those moving in company circles, lest the flotation of one or two doubtful concerns upon the London market should give the youthful gold field a bad name among financiers. From the reports which have come to hand from Guiana, there would appear to be several highly-favourable properties in the colony; and if there are to be any set going in London, it would be as well that they should be the very pick of the lot. In mining movements, more than elsewhere, everything depends upon first impressions; and, to a large extent, the welfare of British Guiana, so far as mining is concerned, will depend, at least for a time, upon the readiness with which the public take up the first enterprises situated there, and the manner in which their confidence is afterwards justified. No more favourable time than the present for bringing into public notice a new gold field of merit could possibly be hoped for; and with judgment, conjoined with a disposition to "take the current when it serves," the colonists might attain their best hopes.

AN example of the benefits of accumulated experience is shown in the alacrity with which the mining leaders in Western Australia are setting about organising their industry. Notwithstanding the colony's comparative juvenility as a mining centre, it has already got a Chamber of Mines, and will probably soon have an institution parallel in class and purpose with the various representative societies meeting in London. The evils wrought by leaving a branch of trade or commerce to look after itself need no emphasis, and it is to obviate them that a union of mining engineers, mine managers, and millmen is on the eve of formation. Meetings for the reception and discussion of papers will be held, and thus an opportunity will occur for the free play of ideas around the processes and methods fitted for the peculiar conditions obtaining in the colony. Several new processes have been proposed for use on the ores of Western Australia, and the adequate testing of them is a work that should be pursued systematically and not by the scrappy efforts of individual managements, undertaken without communication one with the other.

A SOCIAL philosopher, exercising himself within the limits of the company circle, would at the present time discover much matter for wonder and some impulse to speculation. Amid the seeming bubbub and confusion of the world of industry and finance there is at least a rough element of order about two processions that are moving continuously along with a steady persistency to give no promise of even a remote intermission. One is a long file of new enterprises issuing out of the darkness to linger for a shorter or longer period in the fitful light of public attention, and the second is an interminable succession of statutory meetings that is vexing the souls of the clerks at Winchester House, and filling up the diary at the Cannon-street Hotel. Stockbrokers' clerks with no leisure the day before yesterday, and the prospect of 5 A.M. the day after to-morrow are feebly enquiring when this thing is going to stop. The company list is swollen like a boa constrictor after a heavy meal. Soon it will have passed beyond the leaflet dimensions so dear to the Religious Tract Society, and have become a volume. It is no part of the duty of a historian of City matters to perturb his readers with unseasonable speculation, and to forecast a futurity on being supplied with a prospectus. His emotions corresponding to the three stages of company existence are stored in water-tight compartments, like those of a parochial Registrar. He smiles at a new issue, is gratulatory over an amalgamation, and produces his pocket-handkerchief when despairing resolutions for winding-up a company are passed by a large majority. Above all, he is endowed with the spirit of silence in a large measure.

THE MINING MARKET.

FRIDAY EVENING.

Holiday stagnation induces flatness, followed by a rally.—A good tone at the close.—Business on a small scale.

THE Mining Market, in common with other departments of the Stock Exchange, has been thoroughly pervaded during the past week with the holiday spirit. Business has been reduced to a minimum, and purchases and sales alike have exercised a quite disproportionate effect upon quotations. The reason for this is not far to seek. Wednesday and Thursday were Jewish holidays in connection with the Feast of Pentecost. The New York Stock Exchange was closed on Thursday, which was Decoration Day. The Derby was run on Wednesday and the Oaks this afternoon, and the Stock Exchange is closed to-morrow (Saturday), by way of extending the Whitsuntide holidays. Never was a week known of such systematic vacation. Little wonder then that the attendance has been thin, as whilst principals were content to stay away on pleasure or otherwise, advantage was taken by their clerks of the opportunity to make some reduction in the arrears of office work. We have already stated that small transactions had a disproportionate effect on prices, and this especially holds good in the case of Monday's, and Tuesday's business, when some considerable declines were established, and general flatness of tone engendered by sales of altogether an unimportant character. Many of the leading dealers having closed their books, those who remained at the receipt of custom would appear to have come to an understanding not to support their market. They took whatever stock was offering, but at their own prices. Under this condition of things, quotations fell away and some ragged bulls, chiefly of the professional class, evinced a nervousness that was not shared by the stronger body of genuine holders. When the turn came, prices recovered just as quickly as they had fallen, but presumably the bulk of the purchases were made by bears to cover speculative sales, so that the actual account was not considerably affected.

Saturday was the beginning of the inaction. The House was thinly attended, and there was no Street Market. The tone was good, but actual transactions counted for nothing. On Monday business was dull, and prices began to fall away. There was a failure in the Mining Market, a jobber being hammered through embarrassments, stated to be due to his having acted as a broker for certain West-End friends, who let him in for their differences. This *contretemps* was not in itself of serious importance, though it served at the time as a pretext for putting the market flatter. In comparison with the pessimistic prophecies on the eve of the Settlement, the casualties for the End of May Account were slight indeed. Land shares participated in the dulness of Gold shares. West Australians were firm, but quiet, and there was practically nothing doing in Miscellaneous, where the tone was weak. On Tuesday weakness gave place to absolute flatness, some substantial blocks of shares being thrown on the market by the dissolution of a partnership. This was a signal for a small stampede amongst the weak-kneed professional bulls, who found some difficulty in cutting their losses in a restricted market. It was noticed at this juncture that a fresh outburst of adverse criticism in pamphlet form had been sent the round of the newspapers for review. In one special instance an effusion by Mr. Felix Abraham, who notoriously looks on the dark side of things, was put into a second edition with an appendix. If philanthropy were the real motive of this gentleman's authorship of the treatise on the "Excesses of the Rand Speculation," it might pertinently be asked why a period of falling markets was selected for the moment of publication instead of the high boom tide. We referred a week ago to a reported manifesto by the French Chargé d'Affaires in London, which was being used as a bear point. During the week an official denial has been given of there being any intention to make such a publication. We refer to this really insignificant episode with a view to pointing out the various petty devices to which operators for the fall have had recourse in the hope of bringing about a further collapse in prices. On Wednesday the market opened with a very sickly appearance, but after lunch buyers came in, producing an almost electrical effect. The tide turned at once, and though transactions were by no means numerous, prices were instantly marked up and the closing was at the best. This state of affairs was observable not merely in the Kaffir section, but in West Australians and Miscellaneous. There was a break in Charters Towers shares, whilst Indians were rather better. On Thursday there was a general revival, in spite of a very thin attendance of members. The tone was altogether more cheerful, and bears considered it prudent to cover their commitments in anticipation of a resumption of the upward movement after the holidays. Continental buying was reported, and quotations for gold shares came over higher from the Paris Bourse. To-day the upward tendency has been well-maintained, and some substantial gains have been scored. The actual business doing was not large, but the selling has come to an end, and from the look of the market, things will be better next week.

South African Mines.

Of the wide fluctuations which have taken place, naturally the widest have been in the heavy stocks. Rand Mines were unchanged at 29¾ on Saturday; they lost half a point on Monday and ¾ on each of the following days, changing hands at 27¼ on Wednesday morning. On Thursday they rebounded 1¼ to 28½, and to-night they close at 29¼, marking a loss of ½ on the week. East Rands were very flat on Wednesday, being sold down as low as 3½, but they closed the same afternoon at 4⅜, and to-night at 4⅜ show a loss of only ¼ on the week. St. Angelo has lost ⅝ at 3¼, and New Comet ⅝ at 2¾. Deep Level shares generally have been fairly well maintained, the chief loss being ⅝ in Nigel Deep at 2¼. Gold Fields Deep, after touching 6¼, rebounded to-day to 6½. Consolidated Deeps, on which a 20 per cent. dividend has been declared, are firm at 5¼, and Roodeport Deep only ¼ down at 3¾. The Barnato Stocks were depressed during the worst of the flatness, but have since shown satisfactory recuperative power. Glencairns are actually ⅛ higher at 4⅛, and Primroses ¼ up at 7½. Buffels dropped to 4⅝ on Tuesday, but finish only ⅛ down at 5¼. Langlaagte Royals are ⅛ easier at 3¾, in spite of the statement that the new stamps are ready to start, giving the company a total of 140 head. Mays have been quietly bought, and close unchanged at 3¼, after dipping below 3 on Wednesday. Spes Bonas were 2⅝ on Wednesday, and close ⅛ down at 2⅜. Pleiades have lost ⅛ at 1⅞. Afrikanders have fallen heavily on the withdrawal of the support afforded whilst the new capital issue was in progress. The last price, 1⅛, though it is by no means the lowest, marks a loss of ⅜ on the week, without taking into account the capitalised value of the rights. Randfontein, which we left with a very strong appearance at 44s. 6d., touched 45s., but broke heavily on Tuesday, and changed hands on Wednesday morning at 39s. There was a smart recovery the same day to 41s. buyers, which quotation has been since maintained. Langlaagte Estate is ⅛ better at 5¼, after being under 5 on Wednesday. Modderfontein was as low as 13½ on Wednesday, but closes only ⅜ down at 14⅜. Rietfontein has entirely recovered to-day a relapse of over half a point. Salisburys actually changed hands at £4 on Wednesday morning on the offer of 100 shares, but rebounded to 4⅜ the same afternoon. To-day the price is ¼ better, but still marks a loss of ½ on the week. Transvaal Gold have been bought and close unchanged at 5¼. Knights advanced to 8 7/16 on Saturday, dipped to 7⅜ on Tuesday, and close 1/16 better on the week at 8⅜. Van Ryn were under 8 on Tuesday, and close ⅛ higher on balance at 9¼. Van Ryn West are down at 4⅜. Falls of ¼ or thereabouts are shown in Heriot at 10⅞, Village Main Reef at 6⅜, Kleinfontein at 5¼, Minerva at 1⅜, Robinson at 8⅞, Tati Concessions at 3⅝, Wolhuter at 6⅜, Ferreira at 16⅜, and Durban at 7½. The Geldenhuis report for 1894, showing an all-round yield of 8·03 dwts. to the ton, has had practically no effect on the price of the shares, which is 1/16 down at 6⅜. Pardy's Range has withstood the weakness of the market, and closes 6d. better at 11s. 6d., in sympathy with the strength of the parent, Pardy's Mozambique Syndicate, which has advanced ⅛ to 3. Gold Coasts have been well maintained at 7s. 9d. A revival has taken place in Swaziland shares, which are 1s. 3d. better at 4s. George and May have been flat on the announcement that fresh capital will have to be raised. The shares changed hands under £1 on Tuesday, but have rallied this afternoon to 1 1/16. George Goch are unchanged at 3 1/16. Bantjes have been good to-day with a rise of ⅜ at 3⅜, which is ⅛ better than last week's price. Crown Reefs are ½ down at 9½, after dipping to 9¼ on Wednesday. Spitzkops are ⅛ lower at 1⅜. Sutherland Reefs have been very flat again, and close at a loss of 2s. 6d. at 6s. Shebas are finally 1/16 better at 1 1/16, after being down to 1⅛. A new introduction is the "Rothschilds'" Gold Mines, a mushroom concern started by a Paris firm, in no way connected with the London financiers of St. Swithin's-lane. The company was registered in the first week of May with a capital of £10, in itself a suspicious circumstance. The course of land shares has been very much the same as that of the gold market. Chartered sagged away on Saturday and Monday, and on Tuesday and Wednesday changed hands under 3¼. They have recovered to 3 5/16, but are still ⅛ down on the week. Oceanas are 1/16 lower at 2 1/16, and Mozambiques 1s. 6d. down at 28s. 6d. Klerksdorps and Potchefstrooms collapsed on Tuesday, in connection with the dissolution of partnership mentioned above. Klerksdorps were dealt in at 16s. 3d. on Wednesday, and changed hands at 19s. 9d. the next morning. The last price—18s. 6d.—shows a loss of 5s. on the week. Pots were anything between 15s. and 18s., but close only 1/16 down at 1. The report for 1894 was issued on Tuesday, showing a balance to the credit of profit and loss of £30,800. Hendersons were specially selected for attack whilst the stampede was in progress and were as low as 3½ on Tuesday. The last price, 4, shows a gain of ⅛ on the week. Zambesias are 1/16 down at 2 1/16, and Bechs have lost 1/16 at 2 1/16. Consolidated Gold Fields dipped to 8⅛ on Thursday, but close at 9¼, or ⅛ lower than last week. South African Gold Trust were dealt in at 7⅜ on Tuesday and Wednesday, and close ⅛ down on balance at 7⅛. "Johnnies" Investments gave way to 3⅛, but close at 4 1/16, which still marks a loss of ¼. South African General Developments, after being 8s. 3d., are unchanged at 8s. Diamond shares have sympathised to a large extent in the general tone of the market. Jagers broke away from 10⅛ to 9⅛, and close at 9⅞, whilst De Beers have fluctuated in a smaller compass, closing 1/16 down at 20 1/16. St. Augustines have lost 1s. 6d. at 13s., and Koffyfontein 1/16 at 1⅛.

West Australians.

Business in this department has been on a very small scale, and changes are not important. The Austin crushing of 130 ounces from 190 tons was not satisfactory, and the shares are ⅛ lower at ⅞. Bayley's Reward have hardened to 10s. 6d., after being 11s., and Lady Lochs have risen to 1 1/16 on a cable stating that a wide reef is being developed. Coolgardie Syndicate (Sherlaw's), on which a 30 per cent. dividend was paid to-day, have changed hands over 17s. Sherlaw's gold shares are sympathetically the turn better at 11s. 6d. The Great Boulder crushing, 1276 ounces from 142 tons, showing 9 ounces to the ton, caused some demand for the shares on Monday, but the slight gain has since been lost. The Murchison Goldfields are coming to the fore, the last escort to Perth having brought 6000 ounces of gold. The shares of this name are steady, at 7s. 6d. Idahos are a shade better at 5s. 3d., Londonderrys are neglected at ⅝, and Golcondas 1/16 down at 1. Hampton Lands have further receded ⅜ to 4½, and the Plains ⅛ to 2 1/16, after touching 2¼. The various finance companies have been neglected, and prices show little alteration.

Miscellaneous Shares.

A good tendency has reasserted itself in copper shares, which close with a strong appearance, after some weakness at the beginning of the week. Rio Tinto dipped to 15¾ on Tuesday, rallied on Wednesday to 16, and again gave way, business being done this morning at 15⅝. A smart rally has carried the price to 16¼ this afternoon. Tharsis at 5, and Mason and Barry at 2 1/16 are each 1/16 higher, with Copiapo unchanged at 2, and Cape Copper ⅛ down at 2, in spite of the declaration of dividend of 1s. 3d., payable July 1. In silver shares Broken Hill Props. are 1/16 better at 2¼, besides clearing the dividend of 1s. A similar distribution is announced for June 19. British were 9s. on Saturday, but no better than 7s. 6d. to-day. Montana are 1s. down at 12s. Burma Rubys are 6d. down at 18s. 6d. The New Zealand Gold group has attracted some attention. Waihi is unchanged at 6⅜, after being down to 6⅛. The report for 1894 shows a profit of £43,500, out of which 20 per cent. has been paid in dividend, and £16,500 is carried forward. Kapangas are unchanged at 10s. 6d., after being 9s. Hauraki are 6d. down at 10s. 6d., and Scotty's 9d. better at 3s. 9d. La Reine d'Or is 1s. 9d. easier at 16s. 3d. New Chums are 3d. down at 14s. 3d. Wentworths have been neglected round about ⅜, whilst Aladdins are 1/16 better at the same price, on the announcement of a crushing of 1250 ounces. The mining captain's report stated that there was no payable ore at the 600 feet level. The chief feature in the Charters Towers group has been a heavy fall in Mill's Day Dawn United, which stood at 1 1/16 on Saturday, and changed hands at 15s. on Wednesday. To-day there has been a recovery to 1 1/16 buyers. It will be remembered that a similar movement was engineered some year and a-half ago, when the shares fell from 30s.

to 12s. 6d. The same pretext was advanced in each case, namely, the action of Mr. Mills, the vendor of the company, in claiming the mining rights on some portion of the property of which he retained the freehold, and so preventing the direct progress of the Company's mining operations. The shares were bought by clever people on the fall, and real holders will be well advised to sit tight. The April return was 2365 ounces, valued at £8200. It is possible that the next dividend may be passed, a circumstance which has probably been fully discounted. Mosman announced a crushing of 730 ounces from 296 tons, yielding a value of £2875. The shares, however, are unchanged at 7s. Indian gold shares show very little change, Mysore Reefs being 6d. easier at 7s., Ooregum $\frac{1}{16}$ better at $3\frac{7}{16}$, and Mysore and Nundydroog unchanged at $3\frac{1}{16}$ and $1\frac{13}{16}$ respectively.

STOCK EXCHANGE SETTLING DAYS.

Settling Days on the Stock Exchange are as follow :—

CONSOLS.

Wednesday, June 5 | Monday, July 1.

STOCKS AND SHARES.

JUNE.

Ticket Days.	Account Days.
Tuesday, June 11	Wednesday, June 12
Tuesday, June 25	Wednesday, June 26

Contango Days for South African Market :—

Saturday, June 8 | Saturday June 22

To-day (Saturday) and Monday next are holidays on the Stock Exchange.

COMPANY FINANCE.

Reports, Balance Sheets, Dividends, &c., of Mining and other Companies.

New Gold Hill Company.

The following circular has been sent to the shareholders :—"In accordance with the wish expressed at the last general meeting, the directors have been endeavouring to make arrangements to acquire a suitable property to be worked by this company, and they are glad to inform you that they have been able to arrange terms with the Hampton Plains Exploration Company (Limited) which they believe to be advantageous, for acquiring certain properties in Western Australia. Under the proposed arrangement it will be necessary to form a new company to be called the Hampton Gold Hill Mines (Limited) with a capital of £200,000, in 400,000 shares of 10s. each. The New Company will take over all the mines, undertaking and assets of the New Gold Hill Company (Limited) in consideration of the issue to the liquidator or his nominees of 253,474 shares of the new company, credited with 8s. per share as paid up thereon. The Hampton Plains Exploration Company (Limited), in consideration of a small cash payment, will grant to the new company the right to fully prospect two blocks of 25 acres each which have been recently pegged out on the estate of the Hampton Plains Estate Company (Limited), in Western Australia, by Mr. Mercer, of Messrs. Bewick, Moreing and Co., who reports that they are on the best part of the reefs already discovered on Block 50, and if these reefs are found to be as rich as expected, the new company will have the right to acquire these blocks for 100,000 fully-paid shares of the new company of 10s. each, and 45,000 shares of the new company of 10s. each, credited with 9s. per share paid up thereon. As the shareholders will perceive, the advantages of this arrangement are that practically no purchase money has to be paid until the new company are satisfied with the value of the property proposed to be acquired, and, further, by making the payment of the purchase-money entirely in shares, the cash capital of the company will be available for the purposes of development. Should the new company decide not to proceed with the purchase of the property, only a moderate expenditure will have been incurred. The shares to be issued to the liquidator will enable him to offer to the shareholders of the New Gold Hill Company (Limited) one share in the new company, 8s. paid, for every share now held by them. It is proposed that the liability of 2s. per share remaining on the new shares shall be payable as follows—viz., 3d. per share on application, and 3d. on allotment. No further call to be made within six months of the date of allotment of the shares, and such call not to exceed 6d. per share. Any further calls not to exceed 6d. per share, and to be made at intervals of not less than three months. With regard to Block 50, Mr. Mercer has cabled to the Hampton Plains Estate (Limited) as follows 'Hampton Plains Estate: Have returned from Block 50. Is distant 40 miles east of Coolgardie, the area is 5 miles by 2½, the total extent being 8000 acres. Upon examination it is found that the block possesses unusually good prospects, particularly to the west of a straight line drawn from the north-west to the south-east corner. There are numerous extensive outcrops forming a belt of veins running parallel with this line. Three of these veins particularly are well worth your attention immediately. Pieces of rock containing visible gold picked up on the surface. Payable alluvial has also been worked. There is plenty of timber on the property, and water can be obtained from wells, as is usually the case.'—*Vide* circular issued by the Hampton Plains Estate (Limited), dated April 5.

"An extraordinary general meeting of the company will be held at Cannon-street Hotel, on Thursday, June 6, at 12 o'clock noon, for the purpose of considering, and, if deemed advisable, passing, either with or without modification or amendment, resolutions to the effect of the subjoined proposed resolutions; and if the said resolutions are passed by the requisite majority, the same will be submitted to a subsequent extraordinary general meeting for confirmation as special resolutions:—1. That it is desirable for the purpose of carrying out arrangements with the Hampton Plains Exploration Company (Limited) to reconstruct the New Gold Hill Company (Limited), and accordingly that the same be wound-up voluntarily under the provisions of the Companies Acts, 1862 to 1890, and that Mr. James Drayson Austen Norris, of Suffolk House, Laurence Pountney Hill, in the City of London, chartered accountant, be and is hereby appointed liquidator for the purpose of such winding-up.—2. That the new company be registered under the name of the Hampton Gold Hill Mine (Limited), or with some other name approved by the liquidator, with a Memorandum and Articles of Association to be also approved by such liquidator.—3. That pursuant to Section 161 of the Companies Act, 1862, the liquidator be and he is hereby authorised to sell and transfer all the mines, mining rights, plant and machinery, and all other the business, property, undertaking, and assets of the company, whatsoever and wheresoever, to the new company, upon the terms and conditions of the draft agreement now submitted to and approved of by the meeting, and identified by the signature of the Chairman thereto, and to enter into an agreement with such new company when incorporated in the terms of the said draft, and to carry the same into effect with such modifications (if any) in the terms thereof as he may think expedient.—Note: The draft agreement referred to is one for the sale of all the undertaking and property of the company to a new company, to be formed with a capital of £200,000 in 400,000 shares of 10s. each, the consideration for such sale being the payment of all the liabilities of the company, and the allotment and issue to the liquidator or his nominees of 253,474 shares of the company credited with 8s. per share as paid-up thereon. A copy of the said agreement can be inspected seven days previous to the meeting at the offices of Messrs. Snell, Son and Greenip, 1 and 2, George-street, Mansion House, London, E.C."

Waihi Gold Mining Company.

The report of the directors of the Waihi Gold Mining Company for the year ended December 31 last states that the revenue account shows gross receipts £84,523, expenditure £40,976, and profit £43,546, which, added to £6334 brought forward from last year's account, gives a balance of £49,880. Out of this balance the directors have set aside £2500 for depreciation of plant and machinery, and have paid four dividends of 1s. per share each, equal to 20 per cent. per annum on the share capital, leaving a balance to be carried forward to next year of £16,551. During the year 24,864 tons of dried ore were treated, producing bullion to the value of £83,023. The 10,000 shares created in January, 1895, have been issued. The development works for which this additional capital was raised are being pushed forward as rapidly as possible.

Two special mining claims in the Union section of the company's property, aggregating about 200 acres have been granted to the company by the Warden of the Gold Fields, and are now awaiting formal confirmation by the Government, which, it is expected, will shortly be granted. This additional ground is on the line of the system of reefs known as the Winner and Amaranth reefs, the latter being a well-defined reef of considerable width. A new and separate company will shortly be organised for the purpose of developing this property. After providing the necessary working capital for the purpose, the remainder of the shares will be the property of the Waihi Company, and their shareholders will have a preferential claim to allotment. It is hoped that work upon the Union property will be commenced within the next few months. The latest reports from the mines continue to be favourable, and the directors congratulate the shareholders upon the satisfactory outlook. The bullion returns for the current year to May 4, 60 head of stamps, show 9540 tons crushed, yielding £33,847 of gold. The additional 30 head of stamps are now running, making 90 head in all, thus increasing the output capacity of the mill by 50 per cent., and it is expected that at least 3000 tons of ore will now be crushed monthly. Dividend No. 8 of 2s. per share, or at the rate of 40 per cent. per annum, was paid on March 12, and a further dividend of 2s. per share will be paid on June 11 next. The directors record with pleasure that they have been able to make arrangements under which a valuable option over 20,000 shares at par (£1 each fully-paid) in the Waitekauri Gold Mining Company (Limited), a new company whose mining property is about five miles from Waihi, will be offered to the Waihi shareholders. This option is to be exercised only by individual shareholders of the Waihi company whose names will be on the register on June 4, and to whom only the shares will be shortly offered on the terms and conditions then specified.

North Coolgardie Company.

The following circular has been sent to the shareholders :—"The directors have received a telegram in code from Mr. Lancaster Hobbs at Coolgardie, dated May 27, reading as follows :—'I am obliged to tell you frankly that a further examination of the property has resulted in my being forced to the conclusion that I was altogether misled in recommending it to you, and that the assays which were made for me, and which accompanied my report, were not reliable. I am waiting you fully by the next mail. It is a very poor mine; won't pay to work. Awaiting instructions.' This communication is so at variance with the opinions expressed by Mr. Hobbs both in his original report and personally to the board, that the directors are at a loss to understand how he could have been so misled on the occasion of his first examination of the property. They have, therefore, deemed it advisable to have an independent report made. This will be obtained at once. The directors need scarcely say how much they regret the unsatisfactory nature of the above cablegram. Fortunately only a small amount was paid for the property, and, as the working has been carried on for a few months only, the company's capital has not been seriously trenched upon. Another point to be borne in mind is that the workings hitherto have been on one vein only, and as Mr. Hobbs has stated that there is also a parallel vein and two cross veins, it remains to be seen what value can be attached to these. Pending the arrival of Mr. Hobbs' letter, giving details and explanations, and of the independent report to be obtained, further outlay on the property will be limited. The earliest opportunity will be taken of placing all information before the shareholders."

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, MAY 31.

Copper.

THE negotiations between the American and European producers respecting an arrangement for restricting export and production respectively have now been finally broken off; and this, as intimated in our last report, would not have been considered a bad feature, were it not for the fact that, notwithstanding the final rupture of negotiations, the manipulations of certain operators are continued in such a manner as not to inspire confidence in the present state and prices of the market. This lack of confidence is shown especially by the ultimate buyers of manufactured copper (sheets, tubes, &c.), who are giving out orders only sparingly. The fact is, that a lot of small speculators have been put into copper at the top prices, and there are heavy prompts before us for the next few months. Confidence in the article, and especially trust in higher prices than those at present ruling, will only come when it is known that these holdings have been cleared off. The frequent fluctuations noted below are an index of the want of faith in the market above alluded to. Consumers are, on the whole, well provided with raw copper, and abstain from buying; on the other hand, sellers have lowered their prices. Business in manufactured continues on a very reduced scale. The speculative market for G.M.B.'s opened on Monday firm, with an advance to £44 10s. for mid-August and for three months. Some rather free selling induced a decline to £44 5s. three months, and £44 s.c., with buyers over at the close at £43 16s. 3d. for the latter position. America, however, continued very firm, and Tuesday opened with purchases of three months, the value of which recovered to £44 10s., but again receded on continued realisations, and touched £44 before the close, whilst spot fell to £43 12s. 6d. The transactions for the two days amounted to about 2100 tons. Wednesday opened flat at £43 15s. three months, and, after a temporary rally to £44, the article grew weaker again, when news came of the definite breaking-off of the negotiations between producers, and spot was done on Thursday at £43 2s. 6d. to £42 15s., and three months at £43 10s. to £43 2s. 2d. This morning business was done at £42 16s. 3d. s.c., and £43 3s. 9d. to £43 7s. 6d. three months, the market closing firm at £42 17s. 6d. to £43 s.c., and £43 5s. to £43 7s. 6d. three months. The total turnover for the last three days amounted to 3500 tons.

Tin.

Considerable sales appear to have been induced by the anticipation of heavy shipments for the month of May, and in consequence of this, as well as under the influence of the lower copper market, the values of tin have undergone a sharp decline. Spots Straits opened at £65 10s., and touched £65 the same day, whilst three months declined from £66 to £65 7s. 6d., the day's turnover amounting to 430 tons. On Tuesday 140 tons changed hands at £64 15s. s.c., and £65 and £65 2s. 6d. three months. Wednesday's turnover was 300 tons, and values were again easier £64 2s. 6d. for spot and £64 4s. three months being touched, the latter position recovered, however, the same day to £65 2s. 6d. On Thursday speculative sales continuing, there was a relapse to £64 10s., followed by a rally to £64 17s. 6d. three months, 450 tons in all changing hands. This morning 285 tons were done at £64 7s. 6d. to £64 6s. 3d. s.c., and £64 10s. to £64 15s. three months, the close being firm at £64 5s. to £64 10s. s.c. and £64 12s. 6d. to £64 15s. three months. Billiton opened fl.39¾ s.c., and closes at fl.39½, having touched fl.39¾ in the interval, three months now being at fl.39⅝, and Banca at fl.30¾.

Pig Iron.

The shipments from Scotland last week amounted to 4712 tons, a falling-off of 495 tons compared with the same week of last year. The market in Glasgow has given way during the week from 43s. 9½d. to 43s. 1d. The close is firm at 43s. 3d. buyers, with hematite at 43s. 5d., and Middlesbrough at 35s.

Lead

has improved still further, and £10 7s. 6d. has been paid. The close is at £10 7s. 6d. to £10 8s. 9d. soft foreign and £10 10s. English.

Spelter

has eased off, buyers having satisfied their requirements. The closing values are £14 15s. to £14 17s. 6d. ordinaries, and £14 17s. 6d. to £15 specials.

Antimony

is firm at last week's price—viz., £31 10s. to £32.

Quicksilver

is firmer at £7 10s. firsts, and £7 8s. to £7 8s. 6d. seconds.

The following are to-night's (May 31) prices of metals :—

	£ s. d.	£ s. d.
Copper.		
Tough cake and ingot	46 5 0	46 15 0
Best selected	47 0 0	47 10 0
Electrolytic Copper	48 10 0	49 10 0
Sheets and sheathing	—	53 0 0
Flat bottoms	—	56 0 0
Chili bars, Good merchantable, Copper tubes, seamless (spot, & 3 months respectively)	42 17 6	43 5 0
		0 0 7¼
Alloys.		
Brass: Wire	—	0 0 5¼
,, Tubes (solid drawn)	—	0 0 6
,, Sheets	—	0 0 5¾
Phosphor Bronze: Alloys II.	—	78 0 0
,, ,, III. or VII. (Cog Wheel Brand)	—	81 0 0
,, ,, XI.	—	83 0 0
,, ,, Vulcan brand A1	—	78 0 0
Duro Metal	—	72 0 0
Bull's Metal	—	73 0 0
	—	65 0 0
Ferrobronze (Vivian's).		
Ingots ...per lb.	0 0 5½	—
Ordinary sheets, plates, bolts and bars	0 0 6½	—
Screw bolts and nuts	0 0 8	—
Pump rods, plain	0 0 7	—
,, finished	0 0 10	—
Delta Metal: No. 4 (per ton)	—	—
,, Sheets and plates (per lb.)	—	—
,, Bars, round, square, flat (per lb.)	—	—
,, ,, hexagon (per lb.)	—	—
Tin.		
English, ingots, f.o.b.	—	69 0 0
,, bars	—	70 0 0
,, refined	—	71 0 0
Straits, spot and 3 months respectively	64 7 6	64 10 0
Australian spot, and three months respectively	65 2 6	65 5 0
Banca ,, (in Holland)	66 15 0	66 17 6
Tin Plates: Charcoal, best quality per box	0 12 0	0 14 0
,, ,, ordinary	0 10 6	0 11 0
,, Coke, best quality	0 9 9	0 10 0
,, ,, ordinary	0 9 3	0 10 0

These prices of tinplates are f.o.b. at Swansea; at Liverpool 6d. per box more.

Iron.		
Pig, G.M.B., f.o.b., Clyde, spot	—	2 3 0
,, Scotch pig, No. 1 Gartsherrie	—	2 10 6
,, ,, Coltness	—	2 12 6
,, ,, Clyde	—	2 8 6
,, ,, Govan	—	2 5 3
Bars, Welsh, f.o.b. Wales	—	4 17 6
Plates ,, ,,	—	5 0 0
Bars, Staffordshire, at works	—	4 17 6
Sheets ,, ,,	—	5 0 0
Plates ,, ,,	—	5 0 0
Hoops ,, ,,	—	5 10 0
Ship plates, Middlesborough	—	4 16 3
Steel: English spring	—	10 0 0
,, ,, cast	—	42 0 0
,, Rails at works, according to section	3 10 0	4 15 0
Lead.		
Spanish or soft foreign	10 7 6	10 8 9
English pig, common	—	10 10 0
,, L.B.	—	10 17 6
,, sheet	—	11 10 0
,, bar lead	—	11 19 0
,, pipe	—	12 0 0
,, red	—	12 10 0
,, white	—	16 5 0
,, patent shot	—	14 10 0
Spelter.		
Silesian ordinary brands	14 15 0	14 17 6
,, special brands	14 17 6	15 0 0
English Swansea	15 7 6	15 10 0
Sheet Zinc	18 0 0	18 5 0
Antimony.		
Antimony	31 10 0	32 0 0
Quicksilver.		
Flasks, 75 lbs. warrants	7 8 0	7 10 0
Manganese.	per unit.	
Ore, c.i.f., U.K. ports		
1st quality, 50 per cent. and upwards	0 0 10	0 0 10½
2nd ,, 47 per cent. to 50 per cent.	0 0 9	0 0 10
3rd ,, 40 ,, 47 per cent.	0 0 7½	0 0 9
Aluminium.		Per lb.
98–99½ per cent. (guaranteed 98 per cent. min.) in ingots (1 cwt. lots)		0 1 7
do do (1 ton lots)		0 1 6
Nickel.		
98–99 per cent. guarantee	0 1 3	0 1 4

The Waitekauri Gold Mining Company (Limited).—The whole of the 135,000 shares issued by this company have been taken up by private subscription. No prospectus has been issued, but from information received we gather that the properties acquired are are situated in the Waitekauri district, in the colony of New Zealand, five miles north-west of the Waihi Mine. The names of these properties are respectively, the Golden Cross and the Komato, which have been favourably reported upon by well-known experts. The secretary of this new company is Mr. Charles Akers, the offices being situated at 11, Abchurch-lane.

On and after June 1 Mr. Miller will remove his offices to more extensive premises at 4, Bishopsgate-street Within, E.C.

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay*, Antimony; *A*, Arsenic; *Bl*, Blende; *Bx*, Borax; *C*, Copper; *D*, Diamond; *G*, Gold; *I*, Iron; *L*, Lead; *M*, Mundic; *N*, Nitrates; *P*, Phosphates; *Q*, Quicksilver; *R*, Ruby; *S*, Silver; *S-l*, Silver-lead; *Sul*, Sulphur; *T*, Tin; and *Z*, Zinc. * in the "Amount of Share" column of British Mines signifies that the mine is conducted on "Cost Book" principles; ‖ in the "Head Office" column of African Mines signifies that the address given is not that of the head office, but of a sub, or transfer office; and †, following the names of African Mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

** The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share Dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct, we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

BRITISH MINES.

Name	Closing Price, May 31, 1895	Closing Price, May 24, 1895.	Am't. of Share	Latest Dividend	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
			£ s.		£ s. d.			
Blue Hills .....*CT*	15/ 20/	5/ 7/6	*	2/- May, '81	5 19 5	5,353	Cornwall	Camborne.
Botallack .. ...*T*	—	—	*	—	51 4 6	1,880	Cornwall	St. Just.
Carn Brea .....*T*	2¾ 3¼	2¼ 2¾	*	2/6 Dec.,'93	22 8 5	6,000	Cornwall	Carn Brea.
Cook's Kitchen ..*T*	5/- 10/-	10/ 11/-	*	—	35 15 10	4,900	Cornwall	Camborne.
Devon Gawton *CA*	par ¼ pm.	par ¼pm.	1 0	—	0 12 6	25,000	Tavistock	8, Finsbury circus.
Devon Gt Cons.*CA*	1⅝ 1¾	1⅝ 1¾	5 0	1/6 May '95	2 0 0	10,240	Devon ..	8, Finsbury circus.
Dolcoath .....*T*	49 51	51 51½	*	12/6 Apr. '94	9 12 6	4,700	Cornwall	Camborne.
Drakewalls *CTM*	—	—	0 5	—	0 2 0	61,856	Cornwall	Dashwood House.
East Halkyn..... ..	20/- 25/-	20/ 25/	1 0	—	0 12 6	12,000	Flintshire	67, Lord St., Liverpl.
East Pool .....*AT*	5¾ 6¼	6 6¼	*	1/6 Sept, '94	0 9 9	6,400	Cornwall	Illogan.
Gawton .....*CA*	— —	— —	2 10	—	2 7 0	12,000	Devon ..	20, Great St. Helens.
Great Laxey.....*L*	1 2	1¾ 1¾	4 0	5/- Apr.,'92	4 0 0	15,000	I. of Man	Douglas, Isle of Man.
Green Hurth ...*L*	1/6	1/6	1 0	-/6 June '89	0 19 0	32,000	Cmberlno	Newcastle.
Halkyn .... *L*	9 10	9 10	1 0	—	1 0 0	10,000	Flintshire	Chester.
Do. Dis. Mn. Drain	8½ 10½	8½ 10½	10 0	4/- Mar. '95	10 0 0	10,000	Flintshire	CornEx.Cmb, Chestr.
	—	—	1 0	6 p c Aug. 94	1 0 0	3,000	Flintshire	67, Lord St., Liverpl.
Isle of Man .....*L*	3⅞ 4¾	3⅞ 4¾	5 0	1/6 Dec. 94	5 0 0	11,000	I. of Man	Chester.
Killifreth .....*T*	7/6 12/6	10/ 11/-	*	1/6 Nov.,'94	5 11 6	6,000	Cornwall	Truro.
Leadhills .....*L*	15/ 20/	⅜ 1¾	6 0	3/- Sep. '92	6 0 0	20,000	Lanarksh.	30, Finsbury-circus.
Llanarmon	par	par	1 0	—	1 0 0	21,990	Denbigh	8, Werburgh Chmbrs
Llanarmon	par	par	1 0	—	0 15 0	3,790	Flintshire	Chester.
Levant .....*CT*	4¾ 5	4¾ 5	*	4/- Nov.,'94	11 9 6	2,500	Cornwall	Penzance.
Lovell .....*T*	—	—	*	1/3 Nov.,'91	1 16 7	7,165	Wendron	3, Gt. Queen-st., S.W.
Minera.....*L*	—	—	5 0	5/6 Mar.,'90	b 0 0	9,000	Denbighsh	Minera, N. Wales.
Nenthd&Tndle.*LZ*	3/6	3/6	1 0	6⅞ Feb.,'91	0 18 0	48,815	Nthumbld	Newcastle-on-Tyne.
NewCooksKitn.*TC*	—	—	*	—	10 18 3	4,900	Cornwall	Camborne.
New Minera	—	—	1 0	1/- Oct., '92	1 0 0	30,000	N. Wales...	6,Queen-street-place.
North Hendre	—	—	2 10	8 p c year 82	2 10 0	11,854	Flintshire	11, Newgt. st., Chstr.
Parc .....*LZ*	—	—	1 0	—	1 0 0	5,000	Llanrwst...	Billiter sq. buildings
Phœnix United*TC*	1/6 2/-	1/6 2/	*	1/- Mar. '90	7 4 6	10,666	Cornwall	Liskeard.
Polberro .....*T*	15/ 20/	1 1¼	*	—	3 7 9	18,000	Cornwall	37, Walbrook.
Rhosemor .....*L*	par	par	1 0	10 p c Sept. 91	1 0 0	1,000	Flintshire	CornEx.Cmb.Chestr.
Rhosemor .....*L*	par	par	1 0	—	0 19 0	18,000	Flintshire	CornEx.Cmb.Chestr.
So. Condurrow *TC*	2/6 7/6	2/6 7/6	*	3/6 Apr. '93	7 17 6	6,123	Cornwall	20, Great St. Helens
South Crofty *TA*	15/ 20/	7/6 12/6	*	—	17 7 6	6,120	Cornwall	Pool, Cornwall.
S. Frances Untd. *T*	10/ 15/	16/6 17/6	*	—	2 7 6	6,000	Cornwall	Redruth.
South Halkyn	par	par	1 0	—	1 0 0	10,000	Flintshire	8, Werburgh Chmbrs
South Halkyn	par	par	1 0	—	0 7 0	30,000	Flintshire	8, Werburgh Chmbrs
Talacre	par	par	1 0	—	0 15 0	20,000	Flintshire	54, Forgate st., Chstr
Tincroft .....*T*	7¼ 8	7¼ 7¾	*	2/- Aug. '94	15 7 6	6,000	Cornwall	Carn Brea.
Weardale .....*L*	8/9	8/9	4 0	1/3 Oct. '90	1 10 0	80,000	Durham...	3, Lombard-court.
West Frances ...*T*	10/ 25/	½ 1	—	2/6 May,'89	17 1 7	6,144	Cornwall	Camborne.
West Kitty .....*T*	6 6½	6¾ 6¾	*	2/- Dec, '94	1 2 0	6,000	Cornwall	37, Walbrook.
Wheal Agar ..*TA*	2/6 7/6	2/6 7/6	*	2/6 Aug. '88	23 15 2	6,000	Cornwall	Redruth.
Wheal Basset ...*TC*	30/ 35/	1¼ 1¾	*	10/- Apr.'88	12 3 0	6,144	Cornwall	Redruth.
Wheal Friendly..*T*	-/6 1/-	-/6 1/-	*	—	0 12 9	10,000	Cornwall	110, Cannon-st., E.C.
Wheal Grenville *T*	12 12½	12 12¾	*	2/6 Nov. '94	18 2 0	6,000	Cornwall	7, Union-court, E.C.
Wheal Kitty.....*T*	2/ 4/	2/- 4/-	*	3/- Mar. '88	4 5 6	8,590	Cornwall	Truro.
Wheal Metal &F.*T*	1/- 1/6	1/- 1/6	*	—	0 13 9	10,784	Cornwall	14, Broad-street.

AUSTRALIAN AND NEW ZEALAND MINES.

Abbotts .....*G*	11/3 13/9	⅝ ¾	1 0	—	0 17 6	67,000	M'rchison	17, Old Broad st.
Achilles Gld Fld.	3/9 4/3	4/- 4/6	2/6	—	0 2 6	642,456	N.Zealand	Poultry.
Aladdins Lamp *G*	13/9 16/3	⅝ ¾	1 0	1/- May '95	1 0 0	100,000	N S.Wales	4-6, Throg. Avenue.
Assoc. Gold Mines	12/6 15/	⅛ ¾	1 0	—	1 0 0	375,000	Coolgardie	20, Bucklersbury
Austin.....*G*	15/ 20/	⅞ 1⅛	1 0	—	1 0 0	50,000	Murchison	23, College hill, EC
Australasian .....*G*	3/3 3/9	4/3 4/9	1 0	-/6 Mar., '92	1 0 0	210,000	Queensind	6, Queen-st. place
Australian .....*C*	— —	— —	20 0	1/6 July '94	7 7 6	18,315	S. Austral.	15, Old Jewry Chbrs
Aus. Bro. Hill Con.	3/ 3/6	3/9 4/3	1 0	1/- June, '91	1 0 0	537,138	N.S.Wales	Dashwood House.
Baker's Creek ...*G*	17/6 22/6xd	17/6 22/6	1 0	1/- May '95	0 17 6	100,000	N.S.Wales	Hillgrove, N.S.Wales
Bayley's Reward *G*	10/ 11/	9/6 10/6	1 0	-/4 Dec. 94	1 0 0	480,000	Coolgardie	F'sb'y. H. Bl'mf'ld St.
Big Blow .....*G*	9/16 11/16	⅝ ⅝	1 0	—	0 15 0	100,000	Coolgardie	Blomfield Ho., E.C.
Blackett's Claim *G*	10/ 15/6	⅛ ⅜	1 0	—	1 0 0	60,000	Coolgardie	Blomfield House
Blue Spur & G. G.	-/6 1/-	-/6 1/	1 0	—	1 0 0	80,098	N.Zealand	6, Gt. St. Helens'
Bonnie Dundee *G*	14/ 15/	11/16 ¾	1 0	—	0 18 6	120,000	Queensind	3-5, Gracechurch-st
Brilliant.....*G*	16/ 17/ xd	¾ ⅞ xd	2 0	-/4 May '95	2 0 0	250,000	Queensind	Charters Towers,
Brilliant Block...*G*	1 15/16 2 1/16 xd	1 15/16 2 1/16	2 0	-/6 Apr. 95	2 0 0	250,000	Queensind	3, Gracechurch-st.
Brilliant, St. Geo.	1 1/16 1 9/16	1 1/16 1 1/8	0 10	6d. May '95	0 6 3	72,000	Queensind	Charters Towers.
Brit. Brok. Hill *S*	— —	— —	1 0	—	1 0 0	—	N.S.Wales	Dashwood Ho., E.C.
Brit. Broken Hill	— —	— —	0 8	—	0 8 0	—	N.S.Wales	Dashwood Ho., E.C
Broken Hill Prop.	2¾ 2¾	2 9/16 2 5/16	0 8	1/- Apr. '95	0 8 0	960,000	N.S.Wales	Dashwood Ho., E.C.
Cashman Brll.... *G*	⅜ ¾	⅜ ¾	1 0	—	1 0 0	60,000	Coolgardie	Winchester House.
Carrington.... .....*G*	6/6 7/6	8/ 9/	12/6	—	0 12 8	100,007	Queensind	9, Tokenhouse Yard,
Con. G. M. of W. A.	⅞ 1	⅝ 1	1 0	—	0 12 6	90,000	W.Austral	14, Hill st., Edinboro'
Coolgardie .....*G*	-/9 1/-	-/9 1/-	0 2	—	8 0 6	40,000	Coolgardie	Winchester House.
Coolgardie(Shriwe)	15/6 16/6	16/ 16/6	1 0	30⅞ June 95	0 6 0	—	Coolgardie	Broad Street Avenue.
Craven's Cal. ... *G*	3/8 4/6	3/6 4/6	0 6	-/3 June 94	0 4 8	100,000	Queensind	30-1, 8. Swithin's-le.
Crown Bayley's..*G*	1/16 1/8 pm	1/16 1/8 pm	1 0	—	0 10 0	80,000	Coolgardie	Bishopsgate Ho. E.C.
Cumbrind (New)*G*	3/ 3/6	3/3 3/9	1 0	2/6 Dec,'87	0 19 0	184,290	Queensind	Blomfield House.E.C
Day Dawn B.&W.*G*	10/6 11/6	11/ 12/	1 0	-/6 Mar. 93	1 0 0	498,400	Queensind	3-5, Gracechurch-st,
Day Dawn P. C. *G*	6/3 6/9	6/3 6/9	1 0	-/6 Apr, '92	1 0 0	490,000	Queensind	Winchester Ho.,E.C
Eaglehawk.....*G*	1/6 2/-	1/6 2/	1 0	—	0 19 9	120,000	Victoria...	31, Lombard-street,
Empress Coolge. *G*	¾ ⅞ dis.	¾ ⅞ dis.	1 0	—	0 10 0	90,000	Coolgardie	2, Tokenhouse bldgs
Eng. & Aus.Cop.*Cu*	1/16	1/16	2 0	2½ 1883	1 17 6	70,000	S. Austral.	136, Palmerston-blds
Frederick the Gt *G*	— —	— —	1 0	—	1 0 0	125,000	Victoria...	St. George's House.
Glenrock ..... *G*	1/ 1/3	1/3 1/9	1 0	—	1 0 0	225,000	N.Zealand	3-5, Queen-st. E.C.
Golconda .....*G*	18/9 21/3	1 1¼	1 0	—	1 0 0	68,086	Murchison	Winchester House
Gold Estates.....	1 9/16 1 11/16	1 5/16 1 7/16	1 0	—	0 10 0	80,000	W.Austral	42, Gresham House.
Great Boulder ...*G*	23/9 26/3	1 3/16 1 5/16	1 0	—	1 0 0	119,380	Yilgarn ..	3, Gracechurch st.
Great Coolgardie...	5/16 7/16	5/16 7/16	1 0	—	0 15 0	85,000	Coolgardie	8, Budge Row.
Great Fingall Rfs.	1⅜ 1¾	1¾ 1¾	1 0	—	1 0 0	175,000	Kurnalpi	B osd Street House.
Golden Gate.....*G*	2/ 2/	2/3 2/9	0 10	—	0 10 0	150,000	Queensind	9, Tokenhouse Yard.
Hampton Lands...	4¼ 4¾	4¼ 4¾	1 0	10/- Nov. '94	1 0 0	64,075	Coolgardie	1, Whittington Avue
Hampton Plains...	2¾ 2¾	2¾ 2¾	1 0	—	0 4 0	350,000	Coolgardie	29, 8. Swithin's lane
HamptonPlainsEx	7/ 8/	9/3 9/6	1 0	—	0 18 0	180,000		Suffolk House, E.C
Hannan's BrwnHill	1 1¼	1 1⅜	1 0	—	1 0 0	65,000	Coolgardie	Broad Street House
Hauraki..... *G*	9/6 10/6	11/6 12/6	2/6	—	0 0 6	250,000	Ceromndi.	Dashwood Ho.; E.C.
Kaboonga .....*G*	2/6 3/	4/ 4/6	0 10	—	0 9 9	500,000	Queensind	70 71, Bishopsgate st.
Kangarilla ....*S*	5/ 6/	6/9 7/3	1 0	—	1 0 0	88,275	So. Austral	68, Coleman street,
Kapanga.....*G*	9/ 10/	⅝ 11/16	1 0	-/6 Jan. '91	0 19 6	250,000	N.Zealand	9, New Broad-street.
Kilkivan.....*G*	— —	— —	1 0	—	1 0 0	81,392	Queensind	4, Coleman-street.
Kinsella .....*G*	18/9 21/3	1 1¾	1 0	—	1 0 0	80,000	Murchison	33, Broad-st. Avenue
Kurnalpi.....*G*	11/ 12/	11/ 12/	1 0	—	— —	—	Coolgardie	Throgmorton House
Lady Loch.....	1 1/16 1 3/16	1/16 ⅛	1 0	—	0 10 0	70,000	Coolgardie	9, Tokenhouse Yard,
Lady Mary Amalg.	1⅛ 1⅜	1 1/16 1 1/16	1 0	—	1 0 0	46,000	Murchison	Blomfield House.
Lindsay	9/16 1/16 dis.	9/16 1/16 dis	1 0	—	0 10 0	65,000	Coolgardie	Copthall House
Londonderry..... *G*	11/8 13/9	9/16 11/16	1 0	—	1 0 0	467,000	Coolgardie	3, Gracechurch-st.
L.& W. Aust. Expl.	1¾ 2	1¾ 2	1 0	20 p.c. Dec, '94	1 8 0	100,000	W. Austral	Broad Street Ho.
Mainland Cons. *G*	par ½pm.	1/16 5/16 pm.	1 0	—	0 15 0	150,000	Murchison	8, Swithin's-lane
Mawson'sRewrd.*G*	15/6 17/6	¾ 1	1 0	—	0 10 0	60,000	W.Austral	28 & 29,8 Swithin's la
Mills' Day Dawn*G*	1 1¼	1¼ 1 3/16 xd	1 0	-/6 May '95	0 15 6	300,000	Queensind	3, Gracechurch-st.
Mosman .....*G*	6/6 7/6	7/- 8/-	1 0	—	1 0 0	58,235	N.S Wales	18, St. Helen's-place.
Mt. Leyshon ..... *G*	— —	— —	1 0	-/6Dec. '90	1 0 0	157,989	Queensind	7, Draper's-gardens.
Mount Morgan *G*	2 1/16 2 5/16	2 1/16 2 5/16	1 0	-/6 June, 95	0 17 6	1,000,000	Queensind	50, Lime-street,
Mount Zeehan &L	-/6 1/-	-/6 1/	1 0	—	1 0 0	193,257	Tasmania	Mansion Ho. Cham.
N. Australian G. F.	19/- 20/-	19/ 20/	1 0	—	1 0 0	20,000		7, Union Court,
New Queen .....*G*	7/3 7/9	7/6 8/-	1 0	-/6 Mar., '95	0 19 6	158,915	Queensind	30, St. Swithin's-la.
Nicol Mines	1/3 2/	3/3 3/9	0 5	—	0 4 0	85,00	Coolgardie	226, Winchester Ho.
North Coolgardie..	1⅜ 1⅝	1 1/16 1 1/16	1 0	2/6 Jan. '95	1 0 0	90,000	Queensind	10, New Broad Street
N. Q'ld. M. Agency	11/ 12/	13/- 14/-	1 0	—	0 12 6	75,000	Victoria...	7-8, Gt. Winchster St.
Queen's Bthdy Un.	3/- 4/-	— —	1 0	—	0 18 0	200,000	W.Austral	33, Old Broad Street.
Sam's With.of Nat.	⅛ ¾	⅛ ¾	1 0	-/3 May, '95	1 0 0	200,00	N.S Wales	Winchester Ho. E.C.
ScottishAustralian	— —	— —	1 0	-/6 June, '95	1 0 0	144,000	Chr. Tow.	6, Crosby-square
Victoria Associatn.	7/ 8/	7/6 8/6	0 5	-/3 Mar., '94	0 5 0	200,000	Queensind	32, Gresham-st., E.C
Victory..... *G*	6¾ 7	6¾ 7¼	1 0	2/- June '95	1 0 0	150,000	N.Zealand	11, Abchurch-ln. E.C
Walhi..... *G*	6/6 7/3	9/6 1/6	0 10	—	0 10 0	6,000	Crydn,NZ	43, Threadneedle st.
Warratah..... *G*	5/- 6/-	5/- 6/-	0 5	—	0 5 0	178,828	N.S Wales	19, 8. Swithin's Lane
Wentworth Exten.	13/9 16/3	⅛ ⅜	1 0	—	1 0 0	350,000	N.S Wales	4-6, Throgmort, Av.
Wentworth Ord.*G*	— —	— —	1 0	—	1 0 0	150,000	N.S Wales	4-6, Throgmort, Av.
Went. Priority...*G*	1/6 2/-	1/- 1/6	1 0	5/- May '95	0 19 6	150,000	N.Zealand	3-5, Queen-street.
W. Argentine... *G*	1 1/16 1 1/16	1¾ 1¾	1 0	20⅞ May '95	1 0 0	17,500	W.Austral	33, Old Broad st., EC
W. Aust. G Conces	1⅜ 1¾	1⅜ 1⅝	1 0	—	0 18 0	200,000	W Austral	54, Old Broad st., EC
W. Aus. Exploring	2 1/16 2 1/16	2 1/16 2 1/16	1 0	2/6 Dec., 94	1 0 0	65,000	Coolgardie	28-29, 8. Swithin's-ln.
W.Australian G.F.	3/16 3/16	3/16 3/16	1 0	—	1 0 0	104,297	W.Austral	257, Winchester Ho.
W. Aust. Mining	4/8 5/8	4/8 5/8	1 0	—	0 3 0	80,000	Pilbarra ...	Winchester House.
W. Mallina .....*G*	2/9 3/3	2/6 3/6	0 5	—	1 5 0	60,000	Coolgardie	28 & 29,8. Swithin's ln
White Feather ...	1⅜ 2	1⅜ 1	1 0	—	1 0 0	25,000	N W Austra	70, Bishopsgate-street
Zapopan.....*G*	6/6 7/6	7/3 7/6	1 0	—	1 0 0	68,000	Tasmania	11, Queen Victoria st
Zeehan Montana *S*	— —	— —	1 0	-/4 May 93	0 2 6	12,000	Tasmania	11, Queen Victoria st
Zeehan Montana *S*	— —	— —	1 0	2½ May 95	0 2 6	12,000	Tasmania	11, Queen Victoria st

EUROPEAN MINES.

Name.	Closing Price, May 31,1895	Closing Price, May 24, 1895.	Am't. of Share	Latest Dividend.	Called up per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
			£ s.		£ s. d.			
Alamillos .....*L*	7/6 12/6	10/- 15/	2 0	-/6 April '95	2 0 0	35,000	Spain	6, Queen-street-plac
Avala .....*Q*	0 ⅛	0 ⅛	1 0	1/- May '93	1 0 0	51,584	Servia.....	4, Tokenho. Bldgs.
Consett Ore	5½	5½	1 0	5/- July 94	1 0 0	55,200	Spain	19, Grey-st., N'castle
English Cr. Spelter	⅛ ⅜	⅜ ⅝	1 0	2½% Aug.'94	1 0 0	84,000	Lombardy	9, Queen-street-place
Fortuna ... . *L*	17/6 22/6xd	17/6 22/6	2 0	1/- April '95	2 0 0	25,000	Spain	6, Queen-street-place
Libiola.....*C*	3¾ 3½	3¾ 3⅝	5 0	4/6 Apr. 95	5 0 0	50,400	Italy	Dashwood Ho., E.C.
Linares .....*L*	4¼ 4½	4¼ 4¾	3 0	4/6 April '95	3 0 0	14,998	Spain	6, Queen-street-place
Mason & Barry...*C*	2 13/16 2 15/16	2¾ 2⅞	5 0	2/- May. '94	5 0 0	185,172	Portugal	87, Cannon-street.
Oscar .....*G*	— —	— —	5 0	—	0 4 6	117,240	Norway ...	6a, Austin Friars.
Pestarena .....*G*	6/- 7/-	6/6 7/6	3 0	—	3 0 0	67,809	Italy	6-7, Queen-street-pl,
Pontgibaud .....*SL*	— —	— —	20 0	11/6 Dec '94	20 0 0	14,000	Coueron...	6-7, Queen-street-pl,
Rio Tinto .....*C*	15 9/16 15 11/16	18½ 16¾	15 0	4/- May, '95	10 0 0	325,000	Spain	30, St. Swithin's-lane
Do. (Mort. Bonds)	103 105	103 105	100 0	5% Apr, '95	100 0 0	£1891,740	Spain	30, St. Swithin's-lane
Do, (2nd do.)	101 103	101 103	100 0	5% Apr. '95	100 0 0	£1024,860	Spain	30, St. Swithin's-lane
Do. (3rd do.)	101 102	101 103	100 0	5 p.c. Apr. 95	100 0 0	£5 7,080	Spain	30, St. Swithin's lane
Ripanji .....*SQ*	4/- 8/-	13/- 14/	1 0	—	0 19 0	95,000	Servia.....	120, Bishopsgt-st, Wtn
Tharsis.....*C Sul*	4¾ 5⅛	4⅞ 5¼	2 0	4/- May, '95	2 0 0	625,000	Spain	Glasgow.
West Frus Pre.pref	— —	— —	10 0	8% Mar. '95	10 0 0	365	Germany	Walbrook Ho., E.C.
West Prussian Pre.	— —	— —	10 0	8% Mar. '95	10 0 0	5,480	Germany	Walbrook Ho., E.C.
West Prussian Or.	— —	— —	10 0	6% Mar. '95	10 0 0	14,050	Germany	Walbrook Ho., E.C.
Wohlfahrt .....*L*	— —	— —	1 0	3% Dec. '94	1 0 0	99,834	Prussia	17, Victoria-st., S.W.
Wohlfahrt	— —	— —	1 0	3% Dec. '94	0 10 0	9,090	Prussia ...	17, Victoria-st., S.W.

INDIAN AND ASIATIC MINES.

Asia Minor Pref. *St.*	—	—	0 10	—	0 10 0	42,430	Asia Minr	2, Metal Ex. Bldgs.
Do. Ord. ...	—	—	0 10	—	0 10 0	59,838	Asia Minr	2, Metal Ex. Bldgs.
Balaghat Mysore *G*	3/9 4/3	4/- 4/6	1 0	—	0 19 0	159,945	India	6-7, Queen-street-pl,
Burma Ruby.....*R*	17/6 18/6	1 1/16 1 1/16	1 0	—	0 18 0	298,551	Burmah...	Suffolk House, E.C.
ChampionReef...*G*	4 13/16 4 15/16	4⅝ 4⅞	1 0	4/- Apr. '95	1 0 0	200,000	India	6-7, Queen-street-pl,
Colar Central ...*G*	1/6 2/	2/- 2/6	1 0	—	1 0 0	200,000	India	Dashwood Ho., E.C.
Coromandel..... *G*	10/ 12/6	⅛ ⅜	1 0	—	0 15 0	95,000	India	6-7, Queen-st.-place,
GoldFldsMysore *G*	24/6 25/6	26/6 27/6	1 0	1/- July '93	1 0 0	275,000	India	6-7, Queen-street pl,
Gold Flds Sl.m *G*	— —	— —	1 0	—	1 0 0	150,000	Siam	19, St. Swithin's-lane,
Hyderabad Dec. ..	9 9¼	9 9¼	10 0	—	10 0 0	115,000	Deccan ...	16, St. Helen's-place,
Kempinkote GdFd	2/3 2/9	2/6 3/	0 5	—	0 3 6	750,000	India	6-7, Queen-st.-place,
Mysore ..... *G*	2 15/16 3 1/16	2¾ 3	1 0	2/- Feb, '95	1 0 0	248,354	India	6-7, Queen-street pl,
My. Harnhalli ...*G*	3/6 4/-	4/ 4/6	1 0	—	0 18 0	100,007	India	2, East India Avenue
Mysore Reefs ...*G*	6/6 7/6	7/ 8/	1 0	—	1 0 0	160,000	India	6-7, Queen-street-pl,
Mysore West(N)*G*	16/3 18/9	19/ 20/	1 0	—	0 19 0	127,408	India	Dashwood Ho., E.C.
Mysore Wynaad *G*	16/3 18/9	19/ 20/	1 0	—	0 19 0	125,000	India	Dashwood Ho., E.C.
Nine Reefs .....*G*	3/3 3/9	3/6 4/6	0 10	—	0 10 0	250,000	India	6-7, Queen-street-pl,
Nundydroog.....*G*	1¾ 1⅞	1¾ 2	1 0	1/6 Mar. '95	1 0 0	200,000	India	6-7, Queen-street-pl,
Ooregum(Dl.O.)*G*	3 5/16 3 7/16	3⅜ 3⅜	1 0	2/6 Apr. '95	1 0 0	145,000	India	6-7, Queen-street-pl,
Do. (10% Pref.).	3 15/16 4 1/16	3⅞ 4⅛	1 0	2/6 Apr. 95	1 0 0	101,011	India	6-7, Queen-street-pl,
Do. (10% Pref.).	3⅜ 3⅝	3⅜ 3⅜	1 0	2/6 Apr, '95	0 5 0	12,989	India	6-7, Queen-street-pl,
Pahang Kabang *T*	⅝ ¾	¾ ¾	1 0	—	1 0 0	200,000	Malay Pn.	4a, Jeffrey's sq., E.C
S. Aust. Petroleum	—	1/ 2/	1 0	—	0 18 6	108,000	Burmah...	12, Pancras Ln., E.C.
Straits Developmt.	—	2⅛ 2⅜	1 0	—	0 19 0	184,292	Pahang ...	15, Copthall Avenue,
Yerrakonda .....*G*	2/6 3/6	2/6 3/-	0 4	—	0 2 6	187,491	Mysore ...	6-7, Queen-street-pl,

NORTH AMERICAN MINES.

Alaska Mexican...*G*	1¾ 1¾	1⅝ 1¾	$5	7 1-5d. Apr. 95	$5	160,000	Alaska.....	30, St. Swithin's-la
Alaska Treadwell*G*	3½ 3¾ xd	3⅝ 3¾	$25	1/6 Jan., '95	$25	200,000	Alaska.... ..	30, St. Swithin's-la.
Almada and T... *S*	-/9 1/-	-/7⅛ /10¼	2/6	—	0 2 6	£51,008	Mexico ...	6, Queen-street-place
American Belle...*S*	1/9 2/3	2/3 2/9	1 0	-/6 Mar. '91	1 0 0	398,890	Colorado	25A, Old Broad-street
Anglo Mexican ...*S*	— —	— —	5 0	3/- Jan. '90	5 0 0	74,850	Mexico ...	23, College Hill.
Arizona (Pref.) Cu	28/3 28/6	— —	4 0	—	4 0 0	158,920	Arizona ...	74, Geo.-st., Edinbor
Do. 6% A Deben.	99	— —	100 0	6½% May '95	100 0 0	£135,300	Arizona ...	74, Geo.-st., Edinbor
Do. 7% B Deben.	82	— —	100 0	7% May '95	100 0 0	£181,300	Arizona ...	74, Geo. st. Edinbor
Big Creek ..... *Ay.*	2/6 3/6	2/6 3/6	1 0	1/- Dec. '91	1 0 0	50,000	Nevada ...	11, QueenVictoria-st.
California ..... *G*	— —	— —	0 10	-/6 May 90	0 10 0	621,808	Colorado	St. George's Ho. E.C,
Colorado Boy.....*S*	— —	— —	1 0	—	1 0 0	112,492	Colorado	11, Poultry, E.C.
Cortes .....*S*	— —	— —	1 0	3% Feb.'93	1 0 0	300,000	Nevada ...	Suffolk House, E.C.
Decatur.....*St.*	— —	— —	1 0	—	1 0 0	32,500	Colorado	35, Queen Victoria-st.
Do.....(Pref.)	— —	— —	1 0	—	1 0 0	12,500	Colorado	35, Queen Victoria-st
De Lamar.....*GS*	23/ 24/	1⅛ 1¾	1 0	1/- Apr, '95

"THE MINING JOURNAL" SHARE LIST—(Continued)

SOUTH AND CENTRAL AMERICAN MINES—(Continued).

Name.	Closing Price, May 31, 1895	Closing Price May 24, 1895.	Am't. of Share	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Huanchaca' .....S	—	—	5 0	4/- Sept. '94	5 0 0	320,000	Bolivia ...	10, Avnu. d'Alma, Paris
Javali ....G	-/6 1/6	-/6 1/6	0 2	8⅛ % '91	0 2 0	105,234	Nicaragua	139, Cannon-street.
Julia Taltal .....N	9/16 9/16	9/16 9/16	1 0	—	1 0 0	200,000	Chili	79½, Gracechurch-st
Lagunas ....A	5¾ 5¾	5⅝ 6	5 0	15p.c. Dec.'94	5 0 0	120,000	Tarapaca	3, Gracechurch st:
Lautaro .....N	7⅛ 7¾	7¾ 8¾	5 0	7/6 Dec. 94	5 0 0	110,000	Chili	70, Gracechurch st.
Liverpool .....N	10¼ 11⅝	10⅝ 11⅝	5	15/-May, 95	5 0 0	22,000	Chili	Liverpool.
Loma .....G	1/9 2/3	2/ 2/6	1 0	—	1 0 0	300,000	Colombia	5, Copthall-building.
London Nit.....N	1½ 2	1⅜ 2	3 0	3/4¾ Nov. '29	5 0 0	10,000	Chili	9, Gracechurch-st
LoudonNit.(Pref.)	3½ 4	3½ 4	6 0	8 % Nov. '94	6 0 0	22,000	Chili	9, Gracechurch-st
Macate	2/3 2/9	2/6 3/	0 2	—	0 2 0	200,000	Peru	11, Old Broad-st, E.C
New Tamarugal N	7/16 9/16	7/19 9/16	1 10	1s. Dec. '94	1 10 0	130,000	Tarapaca	50, Lime-street, E.C
Do. 8 % Cum Pref	⅞ 1	15/16 1 1/16	1 10	8 p.c. Feb. '95	1 10 0	130,000	Tarapaca	50, Lime-street, E.C
Do. 6 p.c. Debs ...	88 92	88 92	100 0	6 p.c. Feb. '95	100 0 0	£260,000	Tarapaca	50, Lime-street, E.C
Orita ....G	1/8 2/-	1/6 2/	1 0	1/- April '89	1 0 0	30,000	Colombia	10, Blomfield-street.
Ouro Preto ... .G	—	—	1 0	—	1 0 0	80,000	Brazil	8, Queen-street-place
Pac. & Jarpampa N	3 3¼xd	3 3¼ xd	5 0	4/- May, '95	5 0 0	72,000	Tarapaca	3, Gracechurch-st.
Primitiva .....N	1½ 2	1¾ 1¾	5 0	2½ % Oct. '89	5 0 0	40,000	Chili	Liverpool.
Quebrada C	4/ 6/	5/16 5/16	3 0	5 % Mar. '92	3 0 0	241,956	Venezuela	38, Nicholas Lane.
Quebrada C	—	—	8 k.	6 % Feb., 94	100 0 0	£400,000	Venezuela	38, Nicholas Lane.
Rosario .....N	5 5½	5 5½	5 0	12/6 May '95	5 0 0	120,000	Chili	57¼, Old Broad-street
Rosario (5 % Deb.)	103 105	103 105	100 0	5 % April '95	100 0 0	£475,000	Chili	57¼, Old Broad-street
St. John del Rey G	1⅞ 1⅞	1⅛ 1⅜	1 0	10 % June '82	1 0 0	323,000	Brazil	Finsby. Ho., Bimf'd st
San Donato ... ...N	2 2¼xd	2 2¼ xd	5 0	2/6 May, '95	5 0 0	32,000	Chili	12, King-st., Liverp
San Jorge .....N	5 5¼	5 5¼	5 0	12/6 May '95	5 0 0	75,000	Chili	9, Gracechurch-st.
San Pablo .....N	1¾ 2¼xd	1¾ 2¼	5 0	2½ % Nov.,'94	5 0 0	32,000	Chili	Gracechurch-st
Santa Barbara ...G	—	—	0 10	1/3 Dec. '88	0 10 0	60,000	Brazil	Liverpool
SantaElena .....N	3/16 3/6	3/16 3/6	5 0	5/- Oct. '94	5 0 0	22,000	Tarapaca	3, Gracechurch-st.
Santa Rita .....N	3 3¼xd	3 3½ xd	5 0	15/- May, '95	5 0 0	20,000	Chili	DashwoodHouse, E.C
San Sebastian ...N	2 2¼xd	2 2¼ xd	5 0	5/ May, '95	5 0 0	29,000	Chili	DashwoodHouse, E.C
Segovia .....G	—	—	5/-	—	0 5 0	120,000	Colombia	5, Copthal-building
8 cre Pref.....G	—	—	1 0	10 % Dec. '94	0 15 0	840	Colombia	23, St. Swithin's la.
Sucre Ord.....G	—	—	1 0	6 % Dec. '94	1 0 0	10,000	Colombia	23, St. Swithin's la.
Tolima "A" .....S	7¼ 7¾	7¼ 7¾	5 0	10/- Apr., '95	5 0 0	14,000	Colombia	18, Finsbury-circus.
Do. "B" .....S	6¾ 6¾	6¼ 7	5 0	10/- Dec., '94	5 0 0	6,000	Colombia	18, Finsbury-circus.
Vic. & Altamira ...	2/9 3/	2/9 3/3	0 5	—	0 5 0	200,000	Venezuela	Broad-st. Avenue.
West Indian.....G	—	—	0 1	—	0 1 0	1,725,585	Bingo. Dm	110, Cannon-street.

AFRICAN MINES.

Name.	Closing Price, May 31, 1895	Closing Price, May 24, 1895.	Am't. of Share	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Abercorn Reef ...G'	-/9 1/	/9 1/	0 5	—	0 4 0	—	Millwood	16, Tokenhouse Yard
African Alluvial ...	1½ 1¾	1⅝ 1 11/16	1 0	—	1 0 0	130,000	Mozambiq	11, Poultry.
Afr can Alluvial ..	12/ 13/	12/9 13/3	1 0	—	0 3 6	20,000	Mozambiq	11, Poultry.
African Coal	8/6 9/	9/3 9/	1 0	—	0 16 6	300,000	Middlebrg	19, St. Swithin's-lane
African Gold Con.	3/ 4/	2/3 2/9	0 10	20 p.c. Jan.'95	0 8 0	300,000	Mossel By	16, Tokenhouse-yard
African Gold Ryco.	13/16 19/16	1⅜ 1⅝	1 0	2/- Oct. 94	1 0 0	175,000	—	23, College Hill.
Afrikander ..... G	1⅜ 1⅝	2⅜ 2½	1 0	—	1 0 0	40,000	Transvaal.	19, St. Swithin's-lane
Agnes Block..... G	1/ 12/6	9/16 11/16	1 0	—	1 0 0	78,507	Transvaal.	54, Old Broad-street
Alexandra EstateG	9/ 10/	12/ 13/	1 0	—	1 0 0	225,000	Rand	Warnford Court, EC.
Anglo-French Exp.	2 15/16 3 1/16	3¼ 3⅜	5 0	10 % Dec. 94	5 0 0	30,300	S. Africa	170, Winchester Ho.
Appantoo ..... G	—	—	1 0	—	1 0 0	77,885	West Cost	Dashwood House.
Aurora ....G	24/ 26/	1¾ 1¾	1 0	5 % Mar.,'93	1 0 0	65,000	Rand	8, Old Jewry.
Balkis Eersteling G	3/3 3/9	4/ 4/6	0 10	—	0 10 0	520,000	Transvaal.	85, Gracechurch-st.
Balkis Land ..... G	4/3 4/9	5/ 5/3	0 10	—	0 10 0	520,000	Transvaal.	85, Gracechurch-st.
Banket..... G	5/ 6/	8/ 9/	1 0	—	1 0 0	200,000	Rand	Johannesburg.
Bantjes Reef .....G	2¾ 3¼	3 3⅝	1 0	—	1 0 0	83,000	Rand	Warnford-court.†
Barrett..... ...G	11/ 12/	12/8 13/6	0 10	—	0 9 0	207,498	De Kaap	17, Basinghall-street
Bechuanaland Exp.	2¼ 2⅝	1 15/16 2⅛	1 0	1/- Mar. 95	1 0 0	200,000	Bechuana.	19, St. Swithin's-lane.
Bech. Trad'g Assoc.	1 15/16 1 15/16	1 15/16 1 15/16	1 0	10 p c May, 95	1 0 0	100,000	Bechuana.	19, St. Swithin's-lane.
Big Golden Quarry	2/ 2/6	2/6 3/-	5/-	—	0 5 0	483,128	Kaap Rivr	4, Bishopsgte. st. Wn.
Block "B" Lang.	23/8 24/6	25/6 26/6	1 0	—	1 0 0	535,000	Rand	8, Princes-st, E.C.†
Boovsen Land ..G	2⅞ 3¼	2¾ 3¾	1 0	—	0 12 0	95,000	Transvaal.	4, Tokenhouse-bldg
Brit. S. A. Char. ..	3½ 3⅝	3 15/16 3 15/16	1 0	—	1 0 0	2,000,000	S. Africa	19, St. Swithin's-lane
Buffelsdoorn..... G	5¾ 5¾	5 15/16 5 15/16	1 0	—	1 0 0	250,000	Potchefstr	7, Lothbury.
Buinwavo Synd. ...	⅞ 1pm	⅞ 1pm	1 0	—	1 0 0	12,000	Matabele.	10, Helen's Place.
Cape Asbestos	2¼ 2⅝	2¼ 2¾	1 0	—	1 0 0	50,311	Orange Rv	19, St. Swithin's-lane
Cape Copper C	2 2¼	2 2⅜	2 0	1/3 July, '95	2 0 0	300,000	Cape Col.	9, Queen-street-place.
Do. 6 % Pref. ...	2 2¼	2 2¼	2 0	1/3 July, '94	2 0 0	45,000	Cape Col.	9 Queen-street-place
Cassel Colliery.....	4⅞ 5¼xd	4¾ 4⅝	1 0	10pc June'95	1 0 0	75,000	Johanbrg.	99, Cannon-street.
Cen. Montrose... G	3/- 4/-	6/- 7/	1 0	—	0 18 6	69,000	Transvaal.	15, George st Mn. Ho.
Champ d'Or..... G	4 4¼	4 4¼	1 0	4/- Jan. 95	1 0 0	116,016	Rand	8, Old Jewry, E.C.
Champ d'Or Deep G	1¼ 1¾	1 15/16 1 15/16	1 0	—	1 0 0	117,499	Rand	8, Old Jewry, E.C.
City and Suburb. G	24 24½	24½ 25	1 0	25 % Mar. '95	1 0 0	75,000	Rand	98, Gresham Ho., E.C
Coetzeestroom ...G	7/ 8/	7/3 7/9	0 5	—	0 5 0	140,000	De Kaap	105, Leadenhall-street
Con. Bultfontein D	28/ 29/	28/9 29/	1 0	3½ % Sept. '94	1 0 0	721,500	Griqualnd	62, Lombard-st.
Con. Deep Levels G	5 5¼	5 5¾	1 0	20 % June 95	1 0 0	187,250	Transvaal	30, St. Swithin's-lane
Con. G. Fields S A.	9 9¼	3¼ 9¾	1 0	5/- May '95	1 0 0	1,250,000	S. Africa	8, Old Jewry.
Do. 6 % Pref.	20/ 22/	11 15/16 12 1/16	6 0	—	1 0 0	1,243,999	S. Africa	8, Old Jewry.
Do. 5½ % Deben...	110⅝ 111⅝	110⅝ 111⅝	1 0	5¼ Jan, '95	5 0 0	670,000	S. Africa	8, Old Jewry.
Crown Reef .. ...G	9⅝ 9¾	9⅞ 10⅛	1 0	25 % June'95	1 0 0	120,000	Rand	120, Bishopsgt st Wn†
De Beers Consol. D	20⅝ 20⅞	21 21⅜	5 0	12/6 Jan.'95	5 0 0	789,791	Transvaal.	62, Lombard-street.
Do. 5 % 1st Deb....	109¾ 109¾	109 100	—	5 % Jan. '95	—	£3,500000	Transvaal.	62, Lombard-street.
Do. 5½ % Bul. Ob.	104¼ 105¼	104 105	—	5½ % Apr. 95	—	720,000	Transvaal.	62, Lombard-street:
Dunbwin Roodept. G	6⅞ 7¼	7 15/16 7 15/16	1 0	3/- Mar.,'95	1 0 0	£125,000	Rand	28, Leadenhall-bldgs
Eastleigh .....G	3⅜ 1¾	1 11/16 1 13/16	1 0	—	1 0 0	240,000	Kierksdrp	Winchester House.
East Rand..... G	4⅜ 4⅝	4¾ 4⅞	1 0	—	1 0 0	570,000	Rand	170, Winchester-ho.
Evelyn ..... G	1⅝ 1¾	1⅝ 1¾	1 0	10 % Jan. '89	1 0 0	66,000	Rand	28, Old Jewry, E.C.
Exploration	1⅜ 1 15/16 p.m.	1⅜ 2 pm:	1 0	1/- Dec. '94	0 4 0	148,000	S. Africa	30, S. Swithin's-ln. †
Exploring Co.	6⅜ 6⅝	6⅝ 6⅞	1 0	25/- Feb. '94	1 0 0	69,350	S. Africa	19, S. Swithin's-ln.
Ferreira .....G	16⅛ 16¾	16⅜ 17⅜	1 0	50 % Mar. '95	1 0 0	45,000	Rand	120, Bishopsgt st. Wn†
Forbes Reef (Nw)G	12/6 13/	—	1 0	—	1 0 0	105,000	De Kaap	45-6, Leadenhall-st.
F Johnson & Co....	19/- 20/-	19/- 20/-	1 0	—	1 0 0	200,000	Mashonld.	8, Old Jewry†
Geldenhuis Deep G	8⅛ 8⅜	8⅛ 8⅜	1 0	—	1 0 0	265,000	Transvaal.	30, St. Swithin's-lane.
Geldenhuis Est. G	5⅜ 6⅜	6⅜ 6⅝	1 0	5 % April '95	1 0 0	187,500	Rand	120, Bishopsgt st, Wn†
Do. Main Reef	20 22	11 15/16 12 1/16	1 0	5 % Apr., 95	1 0 0	150,000	Rand	Warnford Court, E.C
George and May G	1 1¼	1 3/16 1 5/16	1 0	—	1 0 0	112,750	Rand	7, Great St. Helen's.
George Gosh ...G	3 3½	2⅞ 3	1 0	—	1 0 0	100,000	Rand	Johannesburg.
Gunberg	1⅝ 1⅝	1 13/16 1 15/16	1 0	—	1 0 0	130,000	Drietfon.	Warnford Court, E.C.†
Glencairn .....G	4 4¼	3¾ 3⅞	1 0	7½ pc Jan. 95	1 0 0	200,000	Rand	2, Drapers-gardens.
Gold Coast Devel.	7/8 8/	7/9 8/3	—	—	—	—	—	11, Queen Victoria-st
Gold Estates T.... G	12/- 13/-	12/- 13/-	1 0	15 % Dec.'89	0 10 0	130,000	Transvaal.	46, Queen Victoria-st
Gld. Fds. Deep...G	6¼ 6¼	6⅝ 6⅞	1 0	—	1 0 0	600,000	S. Africa	8, Old Jewry.
G. F. of Mashonld.	12/6 15/	5/8 5/8	1 0	—	1 0 0	200,000	Mashonld	19, St. Swithin's-ln.
G.F.Tierrad' Fuego	3/9 4/3	3/9 4/3	0 4	—	0 4 0	400,000	Mozambiq	2, Tokenhouse Bldgs
Grahamstown .. G	17/- 18/-	18/- 19/-	1 0	—	1 0 0	150,000	Rand	14, Throgmorton-st.

AFRICAN MINES—(Continued)

Name.	Closing Price, May 31, 1895	Closing Price, May 24, 1895.	Am't. of Share	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
			£ s.		£ s. d.			
Graskop .....G	6/6 7/	7/9 8/3	0 5	2½ % Mar. '92.	0 5 0	400,000	Lydenburg	85, Gracechurch-st.
Griqualand W....D	7⅛ 7¾	7⅛ 7⅝	0 0	2 % Sept. '94	—	105,700	Transvaal .	62, Lombard-street
Guy Fawkes.....G	11/6 12/6	10/- 11/6	0 10	—	10 0 0		—	
Gwelo Exploratn.	4/6 5/6	4/9 5/3	10 10	—	0 8 0	24,000	Manica.....	Broad-st. Avenue
Harmony (Pref) G	7/- 8/	8/6 9/6	1 0	—	1 0 0	260,000	—	79½, Gracechurch-st
Henderson's Trans	3⅞ 4⅛	3¾ 4	1 0	—	1 0 0	250,000	Zoutpan bg	8, Old Jewry.†
Henry Nourse ...G	5⅛ 5¾	5¾ 6	1 0	—	1 0 0	100,000	De Kaap...	Warn'ord-court.
Joe's Reef .....G	18/ 20/	⅞ 1	1 0	—	1 0 0	57,404	De Kaap ..	21, Mincing Lane.
Johannesburg G.F	8/ 9/	6/ 7/	1 0	—	1 0 0	99,537	Johanburg	31, Lombard st., E.C
Johannes. Invest.	3⅞ 4	4¼ 4⅜	1 0	10 p c Dec. 94	1 0 0	650,000	—	7, Lothbury.
Johannesburg Par	4⅝ 4⅞	5 5¼	1 0	12½ % Nov.,'3	1 0 0	21,000	Rand.....	Johannesburg.
Jubilee .....G	10⅛ 10½	10¼ 10¾	1 0	30 % April '95	1 0 0	30,000	Rand.....	8, Old Jewry.†
Jumpers .....G	4⅝ 4⅞	4⅞ 5¼	1 0	25 % Dec. '94	1 0 0	100,000	Rand.....	120, Bishopsgt st, Wn†
Kaffirs.....	¾ 1	¾ 1	1 0	—	1 0 0	80,000	Nrth. Kaap	3, Budge Row, EC
Kimberley .....D	par ⅛ pm	par ⅛ pm	1 0	—	0 10 0	98,672	Kimberley	19, Finsbu y circus.
Kimberley Rdpt....	3¼ 3⅞	3¾ 3⅞	1 0	—	1 0 0	125,000	Kimberley	2, Drapers-gardens.
Klerksdorp	18/9 19/6	22/6 23/6	0 10	—	9 8 0	400,000	—	110, Cannon St.
Koffyfontein.....D	1 1/16 1 1/16	1¾ 1¾	1 0	—	0 18 6	119,000	Zoutpan'bg	120, Bishopsgt st. Wn
Langlaagte Est. G	5 5½	5 1/16 5 3/16	1 0	10 p.c. Mar.'95	1 0 0	470,000	Rand.....	59, Holborn Viaduct
Do. Royal	39/16 3 11/16	3 15/16 4 1/16	1 0	5 % Sept. '93	1 0 0	100,000	Rand...	2, Drapers-gardens.
Lionsdale	8/- 9/-	9/- 10/-	1 0	—	1 0 0	115,000	Lydenburg	85, Gracechurch-st.
Lisbon-Berlyn .. G	5/9 6/3	6/- 6/6	2/6	—	0 2 6	881,233	Lydenburg	110, Cannon-street
London & S. A. Ex.	11¾ 11¾	11¾ 12¼	0 10	3/- Mar. '95	0 10 0	100,000	S. Africa ...	19, Finsbury-circus.
Lower Roodepoort	5/6 6/6	7/3 7/9	1 0	—	1 0 0	150,000	Vlakfontn	8, Old Jewry, E.C.
Luipaards Vlei Est.	17/- 18/-	19/- 20/-	1 0	6 % Mar. '90	1 0 0	319,093	Rand..... ...	Warnford-court.†
Main Reef (New)G	1¾ 1⅝	1 15/16 1 15/16	1 0	—	0 10 0	300,000	Rand.....	8, Old Jewry.
Mashon Agency...	2⅛ 2¾	2⅞ 3	1 0	—	1 0 0	100,000	Mashonald	8, Old Jewry, E.C.
Massi Kessi	9/- 10/	9/6 10/6	0 10	—	0 10 0	60,000	Manica	Broad Street Avenue
May Con. (New) G	3 1/16 3 3/16	3 1/16 3 1/16	1 0	10 p c Apr. 95	1 0 0	430,000	Rand	4, Lothbury.†
Metropolitan (N) G	2⅜ 2⅞	2 11/16 2 15/16	1 0	—	1 0 0	75,020	Rand.....	1, Crosby Square.†
Meyer & Charl....G	7 7⅛	7⅛ 7⅛	1 0	30 % Dec., '94	1 0 0	71,687	Rand.....	Warnford-court.†
Modderfontein.. G	13⅞ 14⅛	14 3/16 14 7/16 xts	1 0	—	1 0 0	200,000	Rand.....	Warnford-court.†
Montrose..... G	¾ 1	¾ 1	1 0	3/- Feb. '90	1 0 0	70,000	De Kaap ...	65, New Broad-street
Moodies G.&E....G	18/9 21/3	1 5/16 1 1/16	1 0	-/4 May '90	1 0 0	240,000	De Kaap .	8, Old Jewry.†
Mozambique.	27/6 30/-	30/- 31/-	1 0	—	1 0 0	400,000	S E. Africa	Broad-street House.
Namaqua C	1 3/16 1 5/16	1 3/16 1 3/16	2 0	2/6 July '91	2 0 0	94,351	Namaquald	34, Leadenhall-bldg.
New African	5⅛ 5¼	5⅛ 5¾	1 0	—	1 0 0	190,000	—	83, Hatton Garden.
New Ariston.....	—	—	1 0	—	1 0 0	2,180	Klerksdorp	Winchester House.
New Aurora West G	5/- 7/-	1/16 9/16	1 0	5 % Mar., '93	1 0 0	30,000	Rand.....	1, Crosby Square
N. Belgium Land..	2⅞ 3⅛	2⅞ 3	1 0	2/- Feb., '95	0 17 0	167,462	Waterberg.	53, Cornhill.
New Chimes..... G	1 1/16 1 1/16	1⅛ 1⅝	1 0	10 % Feb. '95	1 0 0	100,000	Rand.....	8, Old Jewry, E.C
New Clewer Estate	2¼ 2⅝	2¾ 2⅞	1 0	5 % Aug. '92	1 0 0	255,000	Langlaagte	120, Bishopsgt. st. Wn
New Crœsus..... G	6/6 7/6	6/- 7/	1 0	5 % Dec. '89	1 0 0	404,344	Griqualand	110, Cannon-street.
New Gordon.....D	10¾ 11¾	11 11¼	1 0	25 p c Mar. 95	1 0 0	88,750	Rand.....	98, Gresham Ho., EC
New Heriot .....G	9⅜ 9⅞	10⅜ 10¾	5 0	10¾ Mar., '95	5 0 0	100,000	Transvaal .	5, Copthall-buildings
New Jagersf. ...D	5 5¼	5⅜ 5⅝	1 0	12½pc Mar.,'95	1 0 0	82,500	Rand.....	Winchester House.
N. Kleinfontein G	3/- 3/3	3/ 3/3	1 0	—	1 0 0	—	Rand.....	53, New Broad-street
New Louis D'Or.. G	7 7¼	6 13/16 6 15/16	1 0	4/- April	1 0 0	278,750	Rand.....	2, Draper's-gardens.
New Primrose ...G	⅛ ¼ pm	par ⅛ pm	1 0	—	1 0 0	110,000	Rand.....	Bartholomew-house
New Rand.....	3¼ 3½	3 11/16 3 15/16	1 0	—	1 0 0	160,000	Rand.....	Warnford-ct., E.C.
New Rietfontein G	13/- 14/-	14/- 15/	1 0	—	0 19 6	299,137	Griqu'ld W	30-1, St. Swithin's-l
New3.Augustine D	2¾ 3	2 15/16 3 1/16	1 0	—	1 0 0	113,701	Rand.....	24, N. John-st., L'pl
New Spes Bona...G	1½ 1⅞	2 1/16 2 1/16	1 0	—	1 0 0	125,000	Heidelberg	19, Bury Street, E.C
New Steyn Estate	1/- 1/8	1/6 2/	0 10	—	0 10 0	48,235	Transvaal	26, Budge-row, E.C
New Virginia ...G	6¾ 7	7 7¼	1 0	10 % Mar. '95	1 0 0	160,000	Rand.....	98, Gresham Ho., EC
Nigel .....G	2⅝ 2¾	2¾ 2⅞	1 0	—	1 0 0	195,000	Heidelberg	8, Old Jewry.
Nigel Deep .....G	10/ 11/6	10/ 11/5	10/-	10 % June '93	0 10 0	160,000	Rand.....	Basing House, E.C.
Nigel Extension ...	7/- 8/-	7/6 8/6	—	—	0 17 6	60,652	Swaziland .	5, Queen-street-place
North Sheba	4¼ 4⅞	5 5⅝	1 0	—	1 0 0	140,000	Black Reef	83, London Wall.
Nourse Deep.....	1 1⅛	1 1⅛	1 0	—	1 0 0	389,750	Potchefstm	19, Bury-st., E.C.
Nyassa (Bearer) ...	2 9/16 2 11/16	2 11/16 2 15/16	1 0	25/- Nov.'89	1 0 0	193,325	Transvaal .	17, Basinghall Street
Oceana	1⅞ 1⅞	1⅝ 1 11/16	1 0	—	1 0 0	125,000	Rand.....	33, Cornhill, E.C.
Oceana Developmnt	3/6 4/6	3/6 4/6	1 0	—	0 18 6	11,857	E. C. Africa	31, Lombard-street.
Ophir Concess. ...	4¾ 5¼	4¾ 5⅜xd	1 0	12½ % May 95	1 0 0	284,000	OrangeF.S.	10, Moorgate-street.
Orange F.S.E. ....D	3⅜ 3⅝	3¾ 3¾	1 0	10 % Mar. '95	1 0 0	30,000	Rand.....	8, Old Jewry.
Orion..... G	5/- 5/6	6/- 6/6	1 0	—	1 0 0	437,888	Kimberley	112, Cannon-st., E.C.
Otto's Kopje..... D	23/ 25/	1 5/16 1 7/16	1 0	—	1 0 0	136,750	Transvaal .	120, Bishopsgt st, Wn.
Paarl Central ... G	2 15/16 3 1/16	2¾ 2⅞	0 10	1/- Jan. 95	0 10 0	13,000	S.E. Africa	Broad St. Avenue.
Pardy's Mozambq.	11/ 12/	10/6 11/6	0 10	—	0 10 0	—	Manica.....	Broad St. Avenue.
Pardy's Range	12/6 15/	⅞ 1	1 0	—	0 17 6	200,000	Swaziland .	6, Queen-street-place
Pigge Peak ..... G	—	—	1 0	—	0 17 6	60,652	Swaziland .	6, Queen-street-place
Pigge Peak ..... G	1⅝ 1¾	1⅝ 1¾	1 0	—	1 0 0	140,000	Black Reef	
Pleiades.....	18/ 20/	1 1¼	1 0	—	1 0 0	389,750	Potchefstm	19, Bury-st., E.C.
Potchefstroom... G	6/- 8/-	6/- 8/-	1 0	—	1 0 0	193,325	Transvaal .	17, Basinghall Street
President Land ...	2¼ 2⅝	3 3½	1 0	—	1 0 0	125,000	Rand.....	33, Cornhill, E.C.
Princess Estate G	40/- 42/-	42/ 43/	1 0	—	1 0 0	2,000,000	Rand.....	59, Holborn Viaduct.†
Randfontein .....G	29 29¼	29½ 30	1 0	—	1 0 0	332,798	Rand.....	120, Bishopsgt st. Wn†
Rand Mines ..... G	1⅞ 2⅛	2⅜ 2⅝	1 0	—	1 0 0	25,000	R&Rhodesa	123, Bishopsgt-st Wn
Rand-Rhodesia ...	1⅞ 2⅛	1⅞ 2⅛	1 0	—	1 0 0	37,000	Transvaal .	19, Finsbury-circus.
Read's Drift .....D	9 9¼	8½ 9½	1 0	—	1 0 0	50,030	Mt &Mash'l	8, Old Jewry.
Rhodesia Explo. ...	8¾ 8⅞	8⅝ 9	5 0	5/- Jan. '95	5 0 0	550,000	M. Rf.'rand	78, Austin Friars, H.C
Robinson .....G	3¾ 4	3⅞ 4	1 0	—	1 0 0	170,000	Rand.....	8, Old Jewry, E.C.
Roodepoort Deep	3¾ 3¾	3⅞ 4	1 0	—	1 0 0	110,000	Rand.....	7, Lothbury, E.C.
Roodepoort (Kim.)	5⅝ 5⅞xd	5¾ 5⅞	1 0	10p.c.Dec. '94	1 0 0	130,000	Rand.....	Warnford-court.†
Roodepoort Un. G	4¾ 4⅝	5 5⅛	1 0	—	1 0 0	300,000	M. Rf.'rand	30-31, S.Swiln's. lane.
Rose Deep	1 15/16 1 15/16	1 15/16 1 15/16	1 0	—	1 0 0	60,000	Krugersdp	4, Tokenhouse bldgs.
Rosenblock Tw'Rfs	4¾ 5	5⅝ 5¾	1 0	—	1 0 0	98,000	Rand.....	98, Gresham Ho., EC
Salisbury Gold ...	1 13/16 1 15/16	1 13/16 1 15/16	1 0	1/- Sept. '94	1 0 0	850,000	Lydenburg	18, S. Helen's place.
Sheba .....G	5/- 7/-	10/- 11/-	0 18 6	—	0 18 6	119,000	Zoutpan'bg	4, Sun Court, E.C.
Silati ..... G	—	—	1 0	10 % Feb. '95	1 0 0	250,000	Rand.....	8, Old Jewry.
Simmer & Jack...G	14¾ 15	14¾ 15	1 0	6/6 Jan. '95	1 0 0	250,000	S. Africa ..	8, Old Jewry.
S. A.Gold Trust ...	7⅜ 7¾	7 13/16 7 15/16	1 0	—	1 0 0	120,000	Elsdafont	6, Great St. Helen's
Southern Geldnus.	5/6 6/6	6/3 6/9	1 0	—	0 15 0	60,000	} Glqld.W.	19, St. Swithin's-ln.
Southern Land.....	14/ 15/	15/- 16/-	1 0	—	1 0 0	20,000	} &B.Bech	19, St. Swithin's-ln.
Southern Land.....	8/ 9/	14/- 15/-	1 0	—	1 0 0	158,000	Rand	Winchester House.
South West Rand	1⅝ 1¾	1⅝ 1¾	1 0	—	1 0 0	99,070	Lydenburg	15, Bishopsgt-st, Wt,
Spitzkop (New) G	23/9 26/3	1¾ 1⅝	1 0	—	1 0 0	34,000	Rand.....	98, Gresham Ho., EC
Stanhope ..... G	1¾ 2	1 13/16 1 15/16	1 0	20 %

NICKEL AND NICKEL-STEEL.

By FRANCIS L. SPERRY. Cleveland, O.

(*Continued from page* 610.)

THE Bureau of Steam Engineering, United States Navy, has had the two intermediate line shafts of the *Iowa* and the two propeller-shafts of the *Brooklyn* made of nickel-steel by the Bethlehem Iron Company. The line shafts are 15¼ inches outside and 9¼ inches diameter inside, while the propeller shafts are 17 inches outside and 11 inches inside diameter, the walls being in both cases 3 inches thick. The Government specifications require a tensile strength of 85,000 lbs. and 50,000 lbs. elastic limit. Six test pieces from one of the propeller shafts of the *Brooklyn* gave the following results:—

NICKEL-STEEL PROPELLER SHAFT FOR U.S. SHIP "BROOKLYN."

Hollow-forged, oil-tempered, rough-machined. Outside diameter, 17¼ inches; inside diameter, 11 inches; length, 38 feet 11¾ inches; weight, 19,712 lbs.

Test bars cut from this tube gave the following results:—

Dimensions of specimens. Inches.	Tensile strength. Lb. sq. in.	Elastic El'ng l'n Lb. sq. in.	per cent.	C'ntr'ct'n per cent.	Fracture.
0·496 by 2	94,185	58,995	26·4	60·83	Dense grey lipped.
0·497 by 2	94,245	60,770	25·55	60·58	" " "
"	93,215	58,740	25·8	61·33	" " "
"	93,730	60,770	25·8	59·81	" " "
0·498 by 2	92,410	59,550	28·0	60·74	" " "
"	90,350	56,470	28·0	60·74	" " "

It is to be noted that the elastic limit of this shaft is about equal to the tensile strength of a shaft made of ordinary mild steel, while the elongation and contraction of area are nearly the same.

A comparison of the strength of the nickel-steel shafts of the U.S. vessels, *Brooklyn* and *Iowa*, within their elastic limits, with that of solid shaft of the same sectional area made of soft, simple steel, having an elastic limit of 30,000 pounds per square inch, and also a comparison of their weights per linear unit with that of solid soft steel shafts of equal strength, may be of interest. The following table gives the results of calculations made by Professor Mansfield Merriman, Lehigh University, Pa.:—

Case I. Comparison of three steel shafts.	Propeller shaft U.S. ship *Brooklyn*. Outside diameter 17 ins., inside diameter 11 ins. Nickel steel, E. L. 50,000 lbs. per sq. in.	Solid shaft of same (approximate) sectional area. Diameter 13 inches. Simple steel, E.L. 30,000 lbs. per sq. in.	Solid shaft same strength under applied loads or horse powers. Diameter 13·90 inches. Simple steel, E.L. 30,000 lbs. per sq. in.
Area of section, square inches ..	131·95	132·73	280·55
Weight per yard, pounds	1,346	1,354	2,861
Comparative strength under applied loads in flexure, or under applied horse-power in torsion ..	307	100	307
Load, in pounds, at middle of a span of 12 feet on two supports, which strains to one-half elastic limit ..	276,200	89,900	276,200
Length of beam on two supports, which is strained by its own weight to one-half elastic limits	121 ft. 6 in.	77 ft. 6 in.	83 ft. 4 in.
Horse-power transmitted at 50 revolutions per minute when strained to one-half elastic limit	15,780	6,130	15,780

Case II. Comparison of three steel shafts.	Intermediate line shaft U.S.S. *Iowa*. Hollow. Outs. diam. 15¼ in.; ins. diam. 9¾ in. Nickel Steel, E. L. 50,000 lbs. per sq. in.	Solid shaft, same (approximate) sectional area. Diameter 12¾ in. Simple steel, E. L. 30,000 lbs. per sq. in.	Solid shaft of same strength under applied loads or horse-powers. Diameter 17·71 ins. Simple steel, E. L. 30,000 lbs. per sq. in.
Area of section, square inches ..	120·17	120·28	246·34
Weight per yard, lbs.	1,225	1,227	2,513
Comparative strength under applied loads in flexure, or under applied horse-power in torsion	293	100	293
Load which, at middle of a beam 12 feet in span on two supports, causes strains equal to one-half elastic limit, lbs. ..	227,200	77,500	227,200
Length of beam on two supports which is strained by its own weight to one-half elastic limit	115 ft. 6 in.	75 ft. 9 in.	80 ft. 8 in.
Horse-power transmitted at 50 revolutions per minute when strained to one-half elastic limit	12,980	4,430	12,980

The hole in a hollow forged simple steel shaft of 15¼ inches outside diameter is 7 inches. Nickel-steel hollow forged shafts having the same outside diameter may have a hole of 11¾ inches diameter. But for fear of any possible chance of buckling, the hole is made 9¾ inches in diameter. The propeller-shafts of the American line steamers *St. Louis* and *St. Paul* are of nickel-steel; they will stand 42½ tons breaking-strain per square inch, and show 28 per cent. elongation and 50 per cent. reduction of area per square inch. The shaft of the *Iowa* will stand 45 tons breaking-strain per square inch, while 33½ tons in the limit in ordinary steel shafts.

"Here, then, is a material admirably suited to the shafting and engine-forging required by the marine engineer of modern high-service engines, and it is believed that as its merits become known its use will be widely extended. In the highest development of the modern marine engines reduction of weight of all parts is of prime importance. This can only be accomplished by reducing sectional area. On the other hand, outside dimensions cannot be usually reduced without sacrificing necessary stiffness. We are, therefore, led to removing the metal along neutral axes, or, in other words, to the use of hollow forging. It is evident that to farther reduce weight, as well as to increase the absolute strength of parts, the designer of marine engines needs a stronger material than that now employed—that is, a material having a greater elastic limit, but at the same time possessing such a degree of toughness as to insure resistance to sudden strain and shock. Simple steel strengthened and toughened by tempering and annealing will show, in specimens cut from the centre of sections (say) 3 inches to 6 inches thick, an elastic limit of about 45,000 lbs. per square inch, an elongation of about 23 per cent., and a contraction of area of from 50 to 55 per cent. A farther and very pronounced improvement in strength and toughness can be obtained by the use of nickel-steel, tempered and annealed as above described. The use of nickel allows a reduction of carbon, makes the steel more sensitive to temper, and facilitates the tempering of irregular shapes. Specimens from nickel-steel forgings, tempered and annealed, will show uniformly an elastic limit of from 50,000 to 55,000 lbs. per square inch, an elongation of 23 per cent. and above, in specimens 2 inches long by ½ inch diameter, and a contraction of area of from 55 to 60 per cent. In cases where, owing to thickness of sections and irregular shape, tempering is not advisable, nickel-steel will still show a higher combination of elasticity and toughness than any other material known, under the same conditions."*

Ordnance.

A complete set of nickel-steel forgings for an 8 inch gun has been made by the Bethlehem Iron Company for the Bureau of Ordnance, United States Navy, and is now being assembled at the Washington Navy Yard. The average physical qualities obtained in these forgings in transverse specimens were:—

	Tensile st. lbs. per square inch.	Elastic limit lbs. per square inch.	Elongation per cent.	Contraction of area per cent.
Tube ..	93,200	58,300	21·2	42·0
Jacket ..	99,900	60,000	20·4	45·9
Hoops ..	109,100	68,200	20·5	46·9

Test specimens were 2 inches long by ½-inch diameter. Comparing with the average of qualities usually obtained in corresponding navy gun-forgings made of simple steel, the tensile strength shows an increase of about 10 per cent, with an increase in elastic limit from 22 to 28 per cent., while the contraction of area and elongation are but slightly reduced.

The Bureau of Ordnance found, while experimenting, that two small-arm barrels showed greater endurance than others. They were respectively of a very high-carbon steel, and a steel containing about 4½ per cent. of nickel. The latter was fairly easy to machine, while the high-carbon steel was almost intractable. Consequently the Bureau decided to adopt nickel-steel for its small-arm barrels. The great excellence attained by the Greener gun is attributed to the use of nickel-steel barrels containing 2·75 per cent. of nickel and 0·2 per cent. of carbon.

Other Uses.

It is evident that, besides the application to which nickel-steel is being put in armour-plate, gun-forgings, and marine shafting, there is still a wider field open for its use in structural steel, heavy castings, car-couplers, car-wheels, boiler-plates, small pinions and knuckles, shear-knives, bicycle-spokes, gears for motors, and all varieties of work demanding hardness, toughness, and malleability.

Plates of iron or steel and nickel, when laid together and heated to welding temperature, may be rolled out into thin plates with a continuous nickel surface on both sides, or iron or steel on one side and nickel on the other. The union of the two metals is not merely a welding, but is of the nature of cementation, an actual alloy being formed to some depth below the surface of contact. There is a steam-vessel in New York harbour sheathed in part, as an experiment, with this material, fastened with iron nails. After eight months' constant service, the iron nails have corroded away, and all of the bottom, except the nickel sheathing, is corroded and foul, while the latter is as clean as when first put on. If nickel nails were used, it would seem as if nickel sheathing, or sheet nickel, would make an ideal sheathing for all salt-water craft. This material is also used for lagging steam cylinders, feed-water heaters, &c. It takes a beautiful polish, and is stronger than brass or copper.

The Niagara Falls Power Company has recently installed four 5000 horse-power electric generators coupled to turbine water-wheels. In this type of generator the periphery of the large rotating field travels at the rate of nearly 2 miles per minute. The bobbins are secured within a ring of nickel-steel that is forged without a weld, having an outside diameter of 139⅜ inches; inside diameter, 130 inches; width, 50¾ inches; weight, 28,840 pounds. This ring of nickel-steel is extremely light for its strength, and resists the centrifugal forces of this large field, while adding but little to its weight.

The Bureau of Steam Engineering, United States Navy, has decided to put nickel-steel boilers in the cruiser *Chicago*, which is shortly to undergo repairs.

Nickel-steel Wire.

Nickel-steel containing as much as 30 per cent. of nickel may be drawn into wire as easily as ordinary steel. Wire of this class, containing sufficient nickel to make the non-corroding qualities of the metal prominent, is especially adapted for hawsers and cable service in salt water. A sample of nickel-steel wire, containing 27·8 per cent. nickel and 0·40 per cent. carbon, used as torpedo-defence netting by the United States Navy, gives the following physical test:—Diameter cross section, 0·116 inch; area of cross section, 0·01057 square inch; reduced diameter, 0·106 inch; reduced area, 0·0088 square inch; con. area, 16·5 per cent.; elongation in two inches, 6·25 per cent.; load in pounds, 2100; breaking strain per square inch in pounds, 198,700.

The high tensile strength of this wire, with the comparatively small reduction in elongation and contraction of area, indicates extreme toughness; and at the same time it is not acted upon by salt water, so that it admirably answers the requirements of marine service.

* R. W. Davenport, Vice-President Bethlehem Iron Company, *Trans. Nav. and Marine Engineers*, vol. I. 1893.

(*To be continued*).

A WELSH GOLD MINE.—In the House of Commons on Thursday, in answer to Mr. E. R. Jones, the Chancellor of the Exchequer, said: "During the nine months last past 10,747 tons of ore have been treated at the Gwynfynydd Mine, yielding an average of 12¼ dwts. per ton. The gross value, assuming the price to be £3 10s. per ounce, would be £23,105. Last month 1385 tons were treated, yielding an average of 1 ounce 6 dwts. 19 grains per ton. There are at present held by lessees of the Crown, for gold mining purposes in North Wales, 27 leases for varying terms, embracing an aggregate acreage of upwards of 10,000 acres, and 50 take-notes for a year, embracing an acreage of similar amount. The receipt from fees for leases or take-notes has been for the nine months £129, and from rent and royalties for the year to March 31, 1895, £642. I may add that I have been taking a good deal of pains to investigate this question, with the desire to do all that is proper to encourage gold mining in Wales."

CORNWALL AND LIMITED LIABILITY.

INTERVIEWS WITH MESSRS. C. V. THOMAS AND JAMES WICKETT.

THE chief responsibility for the introduction of the Limited Liability principle to the management of Dolcoath Mine undoubtedly belongs to Mr. C. V. Thomas, of Camborne, the eldest son of Captain Josiah Thomas. Mr. Thomas is a partner in the firm of Daniell and Thomas, solicitors, and has for a long time held strong views as to the desirability or otherwise of the continuance of the Cost-book system of working Cornish mines. The breakdown of Captain Josiah Thomas and the serious condition of things at the mine offered a favourable opportunity for a start, and within a short time of the temporary retirement of his father from the management of Dolcoath, Mr. C. V. Thomas was expounding to the committee his views on the matter, and suggesting a scheme for conversion which has now been made public, and received the consent of the shareholders. A representative of *The Mining Journal* called on Mr. Thomas this week with the object of ascertaining his opinion as to the advantages likely to accrue from the adoption of the Limited Liability principle.

Mr. THOMAS explained that there could be no doubt about the fact that there was a rooted prejudice amongst Cornish mine adventurers against Limited companies for mining operations. "This," said he, "arises largely from the knowledge that most, if not all, that had been started in Cornwall have been failures. I don't say that is a well-grounded prejudice, because there are circumstances peculiar to nearly every instance, but whenever any such suggestion is made we get brought out the records of years to prove that the Cost-book mines have been amongst the most successful in the world—and I believe that is perfectly true—and then, ask: "What reason is there to change?"

"What do you think personally of the Cost-book system?"

"Well," said Mr. Thomas, "I consider it an ideal system. It is the simplest of all methods of working any property, because it is an ordinary partnership, and I do not think we shall see it improved. From the creditors' standpoint there could be nothing better, for any creditor has absolute security, and the powers under the Stannaries Acts are quite sufficient to prevent impecunious people being put on the register if the purser exercises his power. I consider also that it is good from a shareholder's point of view—though this is a minor point—because it gives facilities for the simplicity and cheapness of transfer. That is no inconsiderable item when you remember that under the Cost-book you can transfer £100,000 worth of stock for 6d., and under the Companies Acts it will cost £50. Another feature about the Cost-book which I consider is valuable from a shareholder's standpoint is that they have had the right of inspection of books, and opportunities of criticising every detail of the accounts more so than could be had in a Limited company—in fact, the management has been more in the hands of the shareholders as a body than is the case under Limited companies. That was more especially the case before the mine committees grew up, when the manager and purser of a mine were directly the servants of the adventurers—they were directly in touch with the shareholders, instead of being sheltered behind committees. Then there is another advantage of Cost-book, the facility with which the shareholders can, if they like, raise whatever capital they require. There is no reconstruction or anything of that sort necessary, because all they have to do is to make a call, and that call need not only cover any liability which may have been already incurred, but may cover proposed future expenditure. The great defect, in my opinion, is not in the system, but in the application of it; shareholders will not build up a reserve fund for contingencies when they have the opportunity. Supposing a mine is doing well, making good profits, and declaring dividends; it very often happens that some of the largest holders do not attend the meetings, and those who are present, anxious to have the most they can have, prevent the adoption of the business-like course of building-up a reserve fund. Then again hope is such an eternal spring in the inner consciousness of a shareholder that he is so continually putting off the evil day when he must put his hands into his pocket to provide the necessary capital expenditure, that a mine is very often starved for want of capital to provide proper modern appliances. Managers have never been able to carry out their ideas of working because they have been handicapped by want of money, and shareholders have hesitated to supply the money because they have always been expecting something to happen which should do away with the necessity."

"But do you think the Cornish shareholders are likely to give up the Cost-book for the Limited Liability?

"Yes, I do. Our mines, you see, have never really faced the question of cheap production. There are, I think, two reasons why public attention is being directed towards Limited companies. First, the supplies of tin have apparently so largely increased that the hope for the future is rather in a diminished cost of production than an increased price for mineral. Granted that, then the cost of production can only be reduced by a large expenditure of money. It means the erecting of modern machinery, doing away with the old antiquated shafts, and this can only be done at a big cost. That money the chief shareholders are, apparently, reluctant to find themselves, and the small shareholders, in the bad times, are unable to. The only alternative, therefore, is to get it from outside. We see from the development of the great mines of the world that large profits can be made with low grade ores, that the cost of production is diminished, and the output largely increased. I believe that, taking a ton of the stuff from our lodes, with a ton of stuff from many of the paying gold mines, that, ton for ton, the value bears close comparison. If this is so, it is not difficult to see that even with the present price for tin, we can with the same appliances as the gold mines make substantial profits. Another powerful reason to my mind, and one which has become more obvious with succeeding years, is the fact that those who have been regarded as the standbacks of the industry are going out of it, or, as they die, the younger generation seems less disposed to speculate in mining. If this process continues, it is only a question of a few years under the present conditions of working before mining would have to die out altogether. That dropping off, and the lack apparently of the same inducement for other men to come in under Cost-book, impresses more clearly than ever the necessity of bringing in fresh investors."

"You believe that the adoption of Limited Liability will bring in outside investors?"

"Well, whether we like it or whether we don't, we must face the fact that the rest of the mines of the world have adopted this principle, and we cannot expect the investing public to adopt for us a system which they do not adopt anywhere else, and, therefore, although theoretically the Cost-book is a good system, and mines under it have been a greater success than those where the Limited system has been the basis, we must suit the public taste if we want the public money. I think these are the reasons which have really turned public opinion. I see, of course, difficulties ahead, which will have to

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be carefully guarded—such as, for instance, the difference which there must be in the management of our mines by the board of directors, rather than by the personal direction of the shareholders. Our best mines have been profitably developed by the skill of our managers, and I feel strongly that they should not be hampered by the directors, but that they should have the same control that they have had over matters of output and the purely practical working of the mine. Another thing is that, for the sake of dividends, we must see that the capital account shall not be unduly strained to relieve the profit and loss account, and that there shall be a depreciation account or a reserve fund built up independently of the reserve capital. We must remember that our best blood, our best workmen, and most experienced miners are going abroad, and it cannot be wondered at when we compare the salaries which are paid in foreign mines to those paid in Cornwall. We shall have to make it worth the while of some of the best to remain at home; it will be better for us instead of paying £50 and getting £50 worth of work done to pay £75, and get £100 worth of work for it. There are other matters, such as the increased supervision of our machinery and men underground—neither of which have been so carefully looked after as should have been the case—which will have to be grappled with; but these are matters which do not affect the main issue. I believe we are going to see better times, and that our mines are going to show even better results than they have done. It is proved that there are very large mineral deposits in Cornwall; we have got the best miners to work them, and it is only a question now of the introduction of further capital to enable not only the mines now working to be converted into successful or more successful undertakings, but the development of setts at present unworked which, with the proper expenditure of money, could be converted into profitable undertakings, provided that in all these instances sufficient funds are provided to give the same facilities for cheap production as the other leading mines of the world have. The present is an opportune time for the promotion of such schemes, for the opinion of the county is apparently in favour of the Limited system, and the lords are showing their willingness to meet the wishes of the investors by granting leases for considerably extended periods at a more favourable rate of dues.

Mr. James Wickett, of the firm of Abbott and Wickett, Redruth, is one of the best-known brokers on the Mining Exchange, and is a shareholder in most of the leading mines, at the periodical meetings of which he is a familiar figure. Mr. Wickett, in a conversation with our representative, expressed strong approval of the new departure.

"There is no doubt," said Mr. Wickett, "that the Cornish people generally would have preferred the continuance of the Cost-book system in the working of their mines, but the outside public have undoubtedly set their faces against it, so that there is no alternative for us but to adopt the system which they have been accustomed to. I am convinced that Cost-book mining on a large scale is doomed, and that sooner or later the whole of our mines will have to go into Limited Liability. It may be some time before some of them fall in with the new order of things, but broadly speaking the Cost-book system will die with the Stannaries Court."

"In what particular do you think the Cost-book system has failed?"

"There is no doubt our mines have not been laid out for permanence, but merely to provide material for a few years. I do not mean to say this is the fault of the managers. It simply arises from the fact that they have been hampered for want of money with which to carry out desirable developments. As the mines have gone deeper so our machinery has become less efficient, and there have been no means of properly replacing and improving it."

"Have you as a broker found that investors from outside the county have a really strong objection to the Cost-book?"

"Undoubtedly. Investors generally insist on having some limit to their liability, and people down here when they have been asked what is the limit of their liability have been unable to give a satisfactory answer. In fact, there is no limit. I do not hesitate to say we could have got numbers of people in our mines but for this fact. Further than this, there is no doubt that the outside people have gradually withdrawn from Cost-book mines, partly because of the reason which I have given, and partly because there have been one or two unfortunate instances in which unexpected calls have had to be made. As to Limited companies, one of the chief objections to the system in Cornwall is that the cost of management is largely increased."

"How do you think the introduction of Limited Liability will affect the market?"

"It greatly depends on the outside public. If they come into our mines, as is anticipated, our market will be much larger than it has ever been. Under any circumstances, the the business will, I think, be done here as much as in London. There is every reason to believe that many who have never had anything to do with Cornish mining will now come in. Large sums of money have been made recently, and people who make money are always looking out for some new sphere of speculation."

African Gold Properties.

The following circular has been issued to the shareholders:—"I am desired by my board to enclose map showing two properties secured by this company, which there is every reason to believe, from the evidence obtained and enquiries made, are most valuable. It is intended to at once form two companies, provided with ample working capital, to acquire and work the same, and in reference to which you will be communicated with in due course. I am also desired to inform you that the sole services of Mr. Oliver Pegler have been secured by my company as their consulting engineer, and that he has left for Johannesburg; also that Mr. F. J. Cooke, a member of the board, has left for Johannesburg, to consider the advisability of forming a local agency or board, and otherwise to attend to the company's interests locally. I have the pleasure also of informing you that Mr. David MacGregor, of 2, Salisbury-quadrant, Glasgow, has joined the London board, and that it is intended, at a merely nominal cost, to form a local board in Glasgow, consisting of Mr. David MacGregor, Mr. Douglas Cairney, of 45, West Nile-street, Glasgow; and Mr. H. C. Hamilton, who is already a member of the London board."

Cape Copper Company.

The directors have declared a dividend of 1s. 3d. per share on the cumulative preference shares and ordinary shares, free of income tax, payable on the 1st day of July to the shareholders on the books of the company on the 5th day of June.

— At a meeting of the ISLE OF MAN MINING COMPANY (LIMITED) directors held on Tuesday, a further interim dividend of 2s. per share on the ordinary shares was declared, payable June 4, and a balance of £1097 12s. was carried forward.

— A London office has been opened for the NEW MIDAS ESTATE AND GOLD MINING COMPANY at 120, Bishopsgate-street Within, E.C.

REPORTS FROM THE MINES

We find it necessary to announce that, owing to the vast numbers of mines, reports, and items of mining intelligence which reach us invariably very late—up to, and frequently after the time of going to press—it is impossible to guarantee the insertion of all of them in the issue in which, in ordinary course they should appear. We always endeavour, however, to make this important feature as complete as possible, and if the secretaries of mining companies, mining captains, and others would kindly make an effort to let their reports, etc., reach us early on Fridays, when it is not possible to let us have them earlier in the week, their doing so would go far to ensure their insertion, and to promote the completeness of our Mining Intelligence.

BRITISH MINES.

CARN BREA.—May 24: Highburrow east. We have commenced sinking Harvey's engine shaft below the 334 fathom level, the whole lift as a certain bargain to a full pare of men. Every encouragement will be given them so as to accomplish the work in the shortest time possible. The 334 end is driven east of crosscut south of Harvey's shaft 17 fathoms. The lode continues strong, and of a promising character, and in no part of the drivage has it been more so than at present; it is now yielding good stones of tin, and must, we think, lead to a productive run of ground. The 334 end is driven west of crosscut south of Harvey's shaft 16½ fathoms. The lode is full size of the end, and improving, producing stones of tin. We were very much pleased with the appearance or both these ends yesterday. The 322 end is driven east of Harvey's shaft 34 fathoms. The character of the ground and lode in this end during the past month has changed very much. We attach importance to the change, seeing the end is getting near the point where we met with the improvement in the upper level. The lode in the 310 fathom level east of Harvey's shaft is worth £15 per fathom; in the rise in back of 310 fathom level £15 per fathom —Highburrow west. The lode in the 286 fathom level driving west of long winze is worth £15 per fathom; in the 238 end west of rise £14 per fathom.—Old sump. The lode in the 256 end driving east on Druid north lode is worth £8 per fathom. We purpose rising in the back of this level during the coming month to communicate with the 244 fathom level, and so lay open a section of stoping ground. The distance driven by our three boring machines at Highburrow east for the past four weeks (in the 334 end east, 334 end west, and 322 end east) was fully 24 fathoms, an average of 8 fathoms in each end.—(Signed) W. T. White, Jno Daddow, Wm. Thomas, John Penhall.

LEADHILLS.—W. H. Paull, May 28: Brown's vein. The 160 fathom level is now extended north of Jeffrey's shaft 50 fathoms 4 feet 6 inches, reset to five men at 87s. 6d. per fathom. Vein in forebreast 4½ feet wide, highly charged with spar, and there are indications for an improvement. No. 2 winze below the 145 fathom level south of Wilson's shaft has been holed to the 160 fathoms level, and in the last 17 feet of sinking the vein was harder and produced scarcely any ore. This point will be squared down, and the men then put to stope over the said level for a short time prior to resuming the driving of the 160 south. No. 3 stope over the 145 fathom level north of Jeffrey's shaft is set to four men at 32s. 6d. per fathom, vein yielding 30 cwts of ore, per fathom. No. 4 stope over ditto north set to four men at 35s. per fathom is worth 30 cwts. of ore per fathom. The 115 fathom level north of Jeffrey's shaft and 115 fathoms level south of old stope above the 130 have been holed, and stoping will be commenced over this level in a few days after the level is squared up. Total distance of 115 fathom level north of Jeffrey's shaft 159 fathoms 5 feet. The 100 fathom level is extended south of Wilson's shaft 208 fathoms 2 feet 6 inches, and set to five men at 60s. per fathom. Vein 4 feet wide, stone rather dark and softer than of late, but still letting out a little water. The crosscut east at this level (the 100) south of Wilson's shaft is advanced 58 fathoms 0 foot 3 inches, but vein not intersected as yet, and ground without any change of note, strings of spar still being met with frequently. This point is set to seven men at 135s. per fathom. A winze to sink below drift over the 100 south of Wilson's shaft on eastern portion of vein is let to four men at 82s. 6d. per fathom, and is yielding 25 cwts. of ore per fathom. A stope above the 85 south on same part of vein is set to two men at 42s. 6d. per fathom, and will produce 35 cwts. of ore per fathom. The 85 fathom level set to four men at 65s. per fathom is driven 171 fathoms 1 foot 3 inches south of Wilson's shaft, and holed to winze sink from the 70. Vein here 4½ feet wide, showing a mixture of spar spotted with ore. The four men in stope above the 85 south of Wilson's shaft are put to sink from 70 down on said stope for ventilation, and set at 60s. per fathom on vein valued at 35 cwts. of ore per fathom. The stope above the 70 fathom level south of Wilson's shaft set to four men at 32s. 6d. per fathom will yield 80 cwts. of ore per fathom. The stope below the 35 south of Flat-rod shaft set to four men at 30s. per fathom will produce 70 cwts. of ore per fathom. Gripp's adit on Sarrowcole vein is set to three men at 80s, per fathom, now extended 99 fathoms 3 feet 6 inches south of George's Roast vein. This point shows strong spots of lead ore in the bottom of the forebreast, and end looks kindly; water still issuing from same.

PRINCE OF WALES (East Cornwall Tin Mining Syndicate).—S. Roberts, James Pyne, May 29: Fair progress is being made in the crosscut north at the 180 fathom level, which is now driven about 9 fathoms from the south side of the slide. The ground is of a very promising nature—killas.

TINCROFT MINE.—Agent's report, May 23: We have cut the lode in the 342 fathom level crosscut, south of Martin's east shaft, but we have not driven far enough through it to give it a value; it has a very kindly appearance. In the 330, west of Martin's east shaft, the lode is producing saving work for tin. In the 320, west of crosscut, east of Martin's east shaft, the lode is worth for tin £11 per fathom. In the 300, west of crosscut, west of Martin's east shaft, the lode has very much improved, and worth for tin £18 per fathom. In Harvey's engine shaft, sinking below the 320, the lode is producing low quality tin-stuff. In Downright shaft, below the 320, the lode is worth for tin £12 per fathom. There is no change in the 212 crosscut, north of Downright shaft, worthy of notice. On Dunkin's lode, in the rise in the back of the 320, south of Downright shaft, we are making very fair progress; the lode is large, and worth for tin £14 per fathom. We shall communicate with the 315 fathom level in about six weeks from this time. At North Tincroft we shall commence to drive the 174 fathom level west of winze in the course of a few days. In the winze below the 154 west of Willoughby's shaft, the lode has very much fallen off in value, but is still producing saving work for tin. In the 145 west of winze, east of Willoughby's shaft, the lode is worth for tin, arsenic, and copper £13 per fathom. In the 120, east of Willoughy's shaft, the lode is worth for tin, arsenic, and copper £12 per fathom. In the 100, east of Willoughby's shaft, the lode is worth for tin and arsenic £10 per fathom. In the 154 crosscut, east of Tyrie's engine shaft, we have met with several branches which are highly mineralised, but we believe the main lode is still further north. In the rise in the back of the 154 east of crosscut, west of Old Tincroft shaft, on the north lode, the lode is worth for tin and arsenic £8 per fathom.—William Teague.

ORION.—Details of working for April: Tons milled, 4562 stamps; working, 40; number of days mill ran, 28; yield from plates, 617·20 ounces of gold; tailings treated by cyanide, 2548 tons; yield of bullion from cyanide works, 2422·70 ounces.

GRASKOP.—The following is an extract from the manager's letter, dated May 2:—"I am prospecting on the north-west boundary, nearest point I can get to Jubilee and Theta, and I think I shall find the reef there the best indications of it we can have. I have also good indications on the eastern face under the Graskop hill of the same reef."

DE LAMAR.—Copy of Captain J. W. Plummer's monthly report for April: Mining. Ore-breaking department. Hamilton vein above the 3rd level. Average width of vein 3 feet 10 inches, assaying $21·87 in gold and $5·93 in silver, equals $27·80 per ton.—77 feet vein above 4th level intermediate. Average width of vein 4 feet, assaying $18·40 in gold and $1·13 in silver, equals $19·53 per ton.—77 feet vein above 4th level west, average width of vein 4 feet, assaying $24·10 in gold and $0·77 in silver, equals $24·87 per ton.—77 feet vein above the 5th level. Average width of vein 2 feet, assaying $19·52 in gold and $1 in silver, equals $20·52 per ton.—77 feet vein above the 7th level. Average width of vein 5 feet 6 inches, assaying $11·37 in gold and $8·63 in silver, equals $20 per ton.—77 feet above the 8th level west intermediate stope. Average width of vein 8 feet 2 inches, assaying $20 in gold and $2·93 in silver, equals $22·93 per ton. 77 feet vein above the 8th level, west stope. Average width of vein 4 feet 6 inches, assaying $22·10 in gold and $2·60 in silver, equal to $24·70 per ton.—77 feet vein above the 9th level. Average width of vein 5 feet 6 inches, assaying $15·62 in gold and $11·23 in silver, equal to $26·85 per ton.—No. 5 vein above the 6th level. Average width of vein 3 feet 3 inches, assaying $23·32 in gold and $1·47 in silver, equal to $24·79 per ton.—No. 6 vein above the 8th level. Average width of vein 3 feet, assaying $21·45 in gold and $3·71 in silver, equal to $25·16 per ton.—No. 7 vein above the 7th level. Average width of vein 6 feet, assaying $22·05 in gold and $3·15 in silver, equal to $25·20 per ton. No. 7 vein above the 8th level. Average width of vein 2 feet 6 inches, assaying $15·55 in gold and $3·03 in silver, equals $18·58 per ton.—No. 9 vein above the 7th level. Average width of vein 4 feet 6 inches, assaying $29·54 in gold and $10·15 in silver, equals $39·69 per ton.—No. 9 vein above the 8th level. Average width of vein 3 feet 1 inch, assaying $36·80 in gold and $2·55 in silver, equals $39·35 per ton.—No. 9 vein above 9th level. Average width of vein 3 feet, assaying $31·31 in gold and $9·26 in silver, equals $40·57 per ton.—Prospecting department. Wilson's vein 5th level east. Reported length 40 feet, advanced for the month 30 feet, total length 70 feet, average width of vein 1 foot 3 inches, assaying $39·15 in gold, $1 in silver, equals $40·15 per ton.—77 feet vein intermediate drift above 4th level west. The total length of this drift is 26 feet, average width of vein 3 feet, assaying $20 in gold, $2 in silver, equa's $22 per ton.—77 feet vein 4th level west. Reported length 142 feet, advanced for the month 8 feet 6 inches. Total length 150 feet 6 inches. The assay value of the vein is low.—77 feet vein north branch 9th level. Reported length 47 feet, advanced for the month 15 feet, total 62 feet. Average width of vein 4 feet 9 inches, assaying $13·90 in gold, $7·80 in silver, equals $21·70 per ton.—77 feet vein, 10th level. Reported length 520 feet, advanced for the month 35 feet 6 inches, total 555 feet 6 inches. The assay value of the vein for the month has been low.—77 feet vein, 10th level east, winze below level. This winze is 18 feet deep. The water is getting a little troublesome. The vein averages 4 feet 6 inches, assaying $20 in gold, $6 in silver, equals $26 per ton. A crosscut north from the 77 feet vein has been driven north; its total length is 29 feet.—No. 5 vein, 5th level, west. This has been advanced 31 feet for the month. The average width of the vein is 3 feet 8 inches, and the average value $19·73 in gold and $1 in silver, equals $20·73 per ton.—Summercamp group. Reported length main tunnel 289 feet. The porphyry remains unchanged. The total depth of the winze is 35 feet. The vein is 2 feet wide, of rather low grade.—Milling department. During the month of April just ended the milling operations were of the usual quiet character. Table of work performed for April. Number of wet tons crushed, 3859·43; number of dry tons crushed, 3473·39; assay value of the pulp, $28·19; gold, $21·25; silver, $6·94; assay value of the tailings, $5·79; gold, $4·77; silver, $1·02; percentage saved, 79·46 per cent.; number of Doré bars produced, 24; number of ounces pure gold produced 2,338·178; number of ounces fine silver produced, 37,447·53; value of gold produced, $46,763·49; value of silver produced, $22,461·49, equal to $69,231·98. Ore shipped during the month, $5,200·00; surplus on sales of bullion, $3,111·72; miscellaneous revenue, $908·41, equal to $78,452·11; deduct all expenses for the month, $38,368·87; estimated profit for month (or at $4·90 to £ sterling, £8180), $40,083·24.—Outside work. There is nothing of any importance doing on the outside. The weather is fine; the health of the camp is very much improved, owing to the clearing influences of the late heavy rains.

MINE REPORTS CONTINUED ON PAGE 3 OF SUPPLEMENT.

GRESHAM GOLD EXPLORING SYNDICATE (LIMITED).—An extraordinary general meeting of the shareholders in the Gresham Gold Exploring Syndicate (Limited) was held on Thursday, at Winchester House, for the purpose of considering a resolution for the increase of the capital of the company.—Mr. J. A. Wallis, who presided, said that the syndicate was formed with a small capital, and adequate representation was arranged for in Western Australia. They floated successfully the Kintore Gold Mines, but latterly their working capital had become too small to allow them to cope with the large increase of business which had come to them. Several advantageous offers had been made to the company by Mr. Gray and other gentlemen, and, as they considered it advisable to continue operations, an increase in the company's capital was necessary. The Chairman concluded by moving:—"That the capital of the company be increased to £50,000 by the creation of 48,000 new shares of £1 each."—Mr. J. H. Garle seconded the resolution, which was put and carried unanimously, and a vote of thanks to the Chairman concluded the proceedings.

ASSOCIATED GOLD MINES OF W.A. –Since the meeting of shareholders on 29th May, the directors have received the following cablegram (delayed in transmission) from Captain Oates, at the mines, viz.:—"Lake View South. The shaft has been sunk 111 feet; reef has an average assay value of 3 ounces per ton; the width of the reef is 7 feet.—Lake View Extended. Open-cuts at the depth of 7 feet, show a body of ore 5 feet wide; reef has an average assay value of 2 ounces per ton.—Australia North. The shaft has been sunk 20 feet. The width of the reef is 5 feet.—Iron Monarch. Have driven a tunnel on the slope of the hill to the east 12 feet. An assay of this sample gave 35 dwts. per ton."

— We are informed by the secretary of the North-West Australian Gold Fields (Limited) that letters of allotment and regret in this company have been posted; the required amount of capital having been over-subscribed.

— The coupon number 35, of the 10 per cent. second mortgage debentures of the PESTARENA UNITED GOLD MINING COMPANY (LIMITED), due to-day (June 1), will be paid on presentation at the office.

— The first batch of letters of allotment in the GEM OF CUE GOLD MINE (LIMITED) have been posted.

— The extraordinary general meeting of the NIGEL GOLD MINING COMPANY (LIMITED), called for May 28th, was adjourned owing to there being insufficient representation of the shareholders.

— The letters of allotment of THE MINES SELECTION COMPANY (Limited) have been posted.

BRILLIANT BLOCK.—The directors have received the following cablegram from the head office in Charters Towers:—"Have declared the usual monthly dividend of 6d. per share, payable on Friday, the 7th June proximo."

CHAMPION REEF.—Mine agents' report for fortnight ending May 6: Garland's shaft. This has been sunk 15 feet 6 inches, total depth 921 feet 30 inches. Lode 1 foot 6 inches, assaying 1 ounce 1 dwt. 10 grains of gold per ton. The 840 feet level north of shaft has been driven 30 feet 3 inches, total length 289 feet 3 inches. Lode 5 feet, assaying 1 ounce 13 dwts. 12 grains of gold per ton. No. 2 new rise in back of level (120 feet north of No. 1 rise) risen 7 feet, total height 7 feet. Lode 5 feet, assaying 1 ounce 6 dwts. 11 grains of gold per ton. The 840 feet level south has been driven 33 feet 3 inches, total length 323 feet 3 inches. Lode 5 feet, assaying 1 ounce 16 dwts. 4 grains of gold per ton. No. 1 rise in back of level risen 19 feet 6 inches, total height 55 feet 6 inches. Lode 1 foot 6 inches, assaying 1 ounce 3 dwts. 8 grains of gold per ton. No. 2 rise in back of level risen 12 feet 9 inches, total height 19 feet. Lode 1 foot, assaying 1 ounce 12 dwts. of gold per ton. The 740 feet level north has been driven 26 feet 3 inches, total length 512 feet 9 inches. Lode 1 foot, assaying 1 ounce 2 dwts. 8 grains of gold per ton. No. 3 rise in back of level risen 22 feet 9 inches, total height 51 feet 9 inches. Lode 4 feet, assaying 1 ounce 10 dwts. of gold per ton. No. 4 new rise in back of level (120 north of No. 3 north rise) risen 5 feet 6 inches, total height 5 feet 6 inches. Lode 1 foot, assaying 10 dwts. 12 grains of gold per ton. Winze below 740 feet level south of shaft sunk 11 feet 9 inches, total depth 20 feet 6 inches. Lode 1 foot 6 inches wide, assaying 1 ounce 1 dwt. 4 grains of gold per ton. The 630 feet level north has been driven 29 feet 6 inches, total length 616 feet 3 inches. Lode 2 feet 6 inches, assaying 1 ounce 9 grains of gold per ton. No. 5 rise in back of level risen 13 feet 9 inches, total height 18 feet. Lode 2 feet, assaying 1 ounce 3 dwts. of gold per ton. No. 4 winze below 530 north sunk 10 feet 9 inches, total depth 43 feet 3 inches. Lode 3 feet, assaying 19 dwts. of gold per ton.—Ribblesdale's shaft. This has been sunk 10 feet 6 inches, total depth 608 feet. Lode 6 inches, assaying 1 ounce 1 dwt. 6 grains of gold per ton. The 540 feet level north, on west part of fold, has been driven 25 feet, total length 526 feet 6 inches. Lode 2 feet, assaying 1 ounce 10 dwts. of gold per ton. The 540 north of east crosscut on middle part of fold driven 20 feet, total length 62 feet 6 inches. Lode 1 foot, assaying 1 ounce 1 dwt. 3 grains of gold per ton. Having arrived at the north end of this part of fold, the driving is suspended. The rise in back of the 540 north on west part of fold to communicate with Carmichael's shaft risen 13 feet, total height 38 feet 6 inches. Lode 3 feet, assaying 1 ounce 13 dwts. 14 grains of gold per ton. This is communicated. The 540 feet level south of crosscut, east of 540 south of shaft, driven 19 feet, total length 120 feet 3 inches. Lode 4 feet 6 inches, assaying 1 ounce 15 dwts. of gold per ton. Incline rise, south of east crosscut at 440 south of shaft, risen 25 feet 9 inches, total height 208 feet. Lode 4 feet, assaying 1 ounce 12 dwts. of gold per ton. The 440 feet level south of No. 1 crosscut west of 440 south on middle part of lode driven 18 feet 6 inches, total length 21 feet 6 inches. Lode 1 foot 9 inches, assaying 15 dwts. 10 grains of gold per ton. Incline winze north of crosscut sunk 11 feet 6 inches, total depth 50 feet. Lode 4 feet, assaying 1 ounce 5 dwts. 10 grains of gold per ton. south of east crosscut at 340 south driven 17 feet 9 inches, total length 25 feet 9 inches. Lode 2 feet, assaying 1 ounce of gold per ton.—Carmichael's shaft. This has been sunk 8 feet 3 inches, total depth below the 440 feet level 55 feet 3 inches. Lode 2 feet, assaying 1 ounce 12 dwts. of gold per ton. This is communicated with the 540 rise north of Ribblesdale's shaft. The 315 crosscut west of shaft driven 13 feet, total length 741 feet, There is no change in the rock, which is very hard.—Rowe's shaft. This has been sunk 5 feet 9 inches, total depth below the 415 feet level 81 feet 3 inches. Lode 2 feet, assaying 2 ounces 11 dwts. 8 grains of gold per ton. Rise in back of 415 north of shaft risen 3 feet 3 inches, total height 43 feet 3 inches. This is communicated with 315 north winze. Driving north from bottom of 415 south winze driven 11 feet 6 inches, total length 11 feet 6 inches. Lode 3 feet, assaying 1 ounce 1 dwt. 4 grains of gold per ton. Winze below 415 north sunk 8 feet 6 inches, total depth 8 feet 6 inches. Lode 2 feet, assaying 1 ounce 12 dwts. 4 grains of gold per ton.—Stopes. Dalyell's shaft. Stope below 620 north of north winze cut 5 fathoms 4 feet 3 inches. No sample. This is suspended for the time. Stope below 620 north of south winze 6 fathoms 1 foot 6 inches. No sample. Suspended. Stope in back of 620 north of 530 north winze cut 12 fathoms 3 feet 3 inches. Lode 2 feet, assaying 1 ounce of gold per ton. Stope in back of 620 north of north rise cut 19 fathoms 5 feet; no sample. This suspended for the time. Stope in back of 620 south of 530 south winze cut 8 fathoms 2 feet. Lode 3 feet 6 inches, assaying 19 dwts. of gold por ton. Stope in back of 620 north of 530 south winze cut 10 fathoms 4 feet 3 inches. Lode 2 feet 6 inches, assaying 1 ounce 10 dwts. 3 grains of gold per ton. Stope below 440 north of north winze cut 9 fathoms 4 feet 3 inches; no sample; suspended. Stope below 440 south of north winze cut 15 fathoms 3 feet 9 inches. Lode 2 feet 6 inches, assaying 11 dwts. 6 grains of gold per ton. Stope below 440 north of south winze cut 4 fathoms 5 feet. Lode 2 feet, assaying 1 ounce 16 dwts. of gold per ton.—Garland's shaft. Stope in back of 740 south of No. 1 north rise cut 23 fathoms 3 feet; no sample. Suspended. Stope in back of 630 north of No. 2 north rise cut 14 fathoms 3 feet; no sample; suspended. Stope in back of 630 south of No. 3 north rise cut 5 fathoms 2 feet 9 inches. Lode 6 feet, assaying 1 ounce 12 grains of gold per ton. (This is a new stope.) Stope in back of 530 south of No. 9 north rise cut 13 fathoms 2 feet; no sample; suspended. Stope in back of 530 north of No. 8 north rise cut 21 fathoms 5 feet 9 inches. Lode 4 feet, assaying 1 ounce 11 dwts. 11 grains of gold per ton. Stope in back of 530 south of No 7 north rise cut 6 fathoms 3 feet. Lode 5 feet assaying 1 ounce 2 dwts 10 grains of gold per ton. Stope north of No. 7 north rise cut 5 fathoms 3 feet 3 inches. Lode 5 feet, assaying 1 ounce 6 grains of gold per ton. Stope north of No. 6 north rise cut 7 fathoms 4 feet, Lode 4 feet, assaying 1 ounce 10 dwts. 6 grains of gold per ton. Stope north of No. 2 north rise cut 9 fathoms 3 feet. Lode 8 feet, assaying 1 ounce 12 grains of gold per ton. Stope north of south rise cut 16 fathoms 1 foot. Lode 3 feet, assaying 16 dwts. 6 grains of gold per ton. Stope in back of 440, south of No. 7 north rise, cut 23 fathoms 3 feet. Lode 4 feet 6 inches, assaying 1 ounce 13 dwts. of gold per ton. Stope north of No. 6 north rise cut 26 fathoms 4 feet 3 inches. Lode 4 feet 6 inches, assaying 1 ounce of gold per ton. Stope south of No. 2 north rise cut 8 fathoms 1 foot. Lode 5 feet 6 inches, assaying 13 dwts. 10 grains of gold per ton. Stope north of No. 2 north rise cut 6 fathoms 2 feet 3 inches. Lode 4 feet, assaying 1 ounce 3 dwts. of gold per ton. Stope in back of 440 south of west crosscut, north of rise, cut 13 fathoms 3 feet 6 inches. Lode 2 feet, assaying 13 dwts. of gold per ton. Stope below 340 north of north winze cut 9 fathoms 5 feet 6 inches. Lode 8 feet, assaying 15 dwts. 6 grains of gold per ton. Stope south of north winze cut 13 fathoms 2 feet 6 inches. Lode 8 feet, assaying 10 dwts. of gold per ton. Stope in back of 240 north of No. 2 north rise cut 12 fathoms 2 feet 6 inches. Lode 2 feet, assaying 1 ounce 7 dwts. 7 grains of gold per ton. Stope south of No. 1 north rise cut 13 fathoms 1 foot. Lode 2 feet, assaying 1 ounce 10 dwts. of gold per ton.—Ribblesdale's shaft. Stope in back of 440 south of No. 2 west crosscut cut 3 fathoms 4 feet 3 inches. Lode 4 feet, assaying 1 ounce 1 dwt. 8 grains of gold per ton. Stope in back of 340 south of No. 2 south rise cut 6 fathoms 1 foot 6 inches. Lode 3 feet, assaying 1 ounce 4 dwts. 3 grains of gold per ton. These are two new stopes. Stope in back of 340 north on fold, cut 8 fathoms 3 feet 9 inches. Lode 8 feet, assaying 1 ounce 15 dwts. of gold per ton. No. 1 stope north of No. 2 rise in back of 240 south cut 12 fathoms 9 inches. Lode 4 feet, assaying 1 ounce 1 dwt. 6 grains of gold per ton. No. 2 stope north of rise cut 3 fathoms. Lode 4 feet, assaying 1 ounce 12 dwts.; suspended. No. 1 stope south of No. 1 rise, cut 6 fathoms 6 feet. Lode 4 feet, assaying 1 ounce 15 dwts. of gold per ton. No. 2 stope cut 6 fathoms 3 feet. Lode 6 feet, assaying 1 ounce 15 dwts. of gold per ton. Stope north of rise cut 7 fathoms 4 feet 9 inches. Lode 2 feet 6 inches, assaying 1 ounce 12 dwts. 4 grains of gold per ton. Stope on east part of lode in back of the 240 south cut 4 fathoms 3 feet 9 inches. Lode 3 feet, assaying 1 ounce 17 dwts, 5 grains of gold per ton.—Rowe's shaft. Stope in back of 315 north of south rise cut 3 fathoms 2 feet 6 inches. Lode 3 feet, assaying 1 ounce 12 dwts. 2 grains of gold per ton. Stope south of rise cut 2 fathoms 5 feet 3 inches. Lode 3 feet, assaying 1 ounce 10 dwts. of gold per ton. The above stoping is for April month.

D'ARCY ESTATES.—Report dated April 20: Main shaft sunk during the week 8 feet, present depth 362 feet; no change. Portion 54 drive from main shaft extended 12 feet, total length 99 feet; face in hard diorite.

FORTUNA.—Mine report, dated May 22: Canada Incosa Mine: In the 110 fathom level driving west of San Pedro's shaft the lode has a promising appearance, and is estimated at ½ ton per fathom.—Los Salidos Mine. We have again taken up the driving of the 212 fathom level east of Taylor's engine shaft, and with the aid of the rock-drill hope to make good speed. The lode in the 200 east of the same shaft is unproductive. The 105 east of Palgrave's shaft will probably be holed to Corzo's winze in the course of the present month.

HARMONY GOLD AND LAND.—Under date May 5 the manager writes from Johannesburg: On a farm, Palmeitfontein (Pietersburg district), gold has been discovered, and most probably it will be "proclaimed" shortly as a payable gold field. In such an event the influx to that part of men and money will be enormous.—Under date April 25 Mr. Procter writes from Leydsdorp: At Pietersburg Mr. Evans can start at once. I have several offers about the farms there. In a few weeks the grass will be burnt, and then work can continue in earnest. I hear that the Government are likely to start the Silati Railway soon, and if so we shall have a big influx here this winter.

LINARES.—Mine report dated May 22: Pozo Ancho Mine. In the 200 fathom level driving south of Peill's engine shaft the men are doing good duty and are carrying on the work very satisfactorily. In the 200 west of the same shaft the lode is wide, and produces good stones of ore, and is estimated at ½ ton per fathom. The lode in the 155 west of the same shaft, valued at ½ ton per fathom, looks more promising and yields good stones of ore. In the 178 west of Warne's crosscut the lode continues large and open and has a kindly appearance, and is worth 1 ton per fathom.—Los Quinientos Mine. Taylor's engine shaft. In the 185 east the lode is regular and well-formed, containing spots of ore, but nothing to value. The 165 east has very much improved in size and value and is now estimated at 4 tons per fathom. The lode in the 150 east is of a promising appearance, containing good stones of ore, worth ½ ton per fathom. In the 130 east nothing of importance has been met with. Isidoro's winze sinking below the 150 fathom level east of Taylor's engine shaft, is going down through a splendid lode, estimated at 4 tons per fathom.

No. 7 NORTH-EAST QUEEN.—The following fortnighly report has been received from the mines, dated Charters Towers, April 12:—Trickett and party at the back of No. 1 level east are stoping on from 2 inches to 6 inches of good quality stone, Mills and party are not doing well at the present time, most of their stone being cut out, but they are now rising at the end of their eastern drive to cut a reef showing in the shaft about 12 feet above them. This is cut out of their drive by a diorite bar running diagonally across it. The stone above prospects very well, so that in a few days I think their block will look much better.—Below No. 2 level west. Balks and party have had a reef from 4 inches to 14 inches in their stope, though it is pinching in places now; still, they have a nice reef at the present time that will probably average 9 inches to 10 inches.—Below No. 2 level east. Balloh and party are still driving on from 6 inches to 18 inches of a reef averaging about 10 inches. This party intend crushing in the course of a week or so. Wherry and Williams below No. 3 level east have a nice reef in the face, at present about 10 inches thick, of real good stone. They have 9 or 10 tons broken below. Tyzer and Cherry gave up their block after working three days, and the other party—Paull and Williams, mentioned in my last report—did not start work. We have hauled for the fortnight about 25 tons of quartz. The directors have decided to contribute one-quarter of the cost of continuing the Golden Gate bore; as, if anything good is met by the bore, it will enhance the value of the No. 7 North-East Queen property.—(Signed) John T. L. Williams.

NEW LONDON ESTATES.—Extract from manager's report dated May 18: Construction. I have this week finished the hoist foundations with plates and shaft boxes in position, and have just started the brick foundations for engine. I am pleased to say we have the 100 horse-power boiler delivered on the mine, and I hope next week to move it on to the foundations and start the masons on the 2 foot brick walls for same.—Ross shaft. I have moved over the small hoist and set up a triangle, which has considerably helped our getting much ore, &c., to surface, also helped greatly in lowering our heavy timbers to place. We have again this week sunk 11 feet, making a total depth of 28 feet from the collar down, and put in three sets of timbers, together with one set of dividers from collar down. The ground in most respects continues the same as heretofore reported to you, with alternating bars of hard and soft decomposed slate, with a tendency to harden as depth is attained. So far I have not found it necessary to blast, but expect to do so within the next few feet. Two small stringers were struck at a depth of 20 feet, which show some tendency to come together. I have so far taken about ½ ton of low grade ore from these veins which will mill about $3 a ton. They are disintegrated quartz, having an unusually large quantity of black manganese sand in the binding, the gold so far being mostly in the binding. These veins run about north 20° east, and dip slightly to the west. From the present indications I am expecting to run into more ore within the next few feet.

OOREGUM.—Superintendent's report for fortnight ending May 7: Taylor's shaft sunk 7 feet, total depth below the 660 feet levels 125 feet. Lode 6 feet wide, assay value 2 ounces 17 grains. The sinking is suspended whilst the 760 feet levels are being commenced; when sufficiently advanced the trip plat will be excavated, and sinking again resumed with all dispatch. The 760 feet level south commenced, driven 11 feet. Lode 6 feet wide, assay value 2 ounces 1 dwt. 12 grains. The 760 feet level north commenced, driven 12 feet. Lode 4 feet 9 inches wide, assay value 2 ounces 4 dwts. 8 grains. The 660 feet level south driven 38 feet, total 248 feet. Lode 6 feet 6 inches wide, assay value 3 ounces 3 dwts. 3 grains. No. 1 winze 660 feet level south sunk 1 foot 6 inches, total 19 feet. Lode 2 feet wide, assay value 2 ounces 14 dwts. 10 grains. The 560 feet level south driven 16 feet 6 inches, total 483 feet. Lode 2 feet wide, assay value 2 ounces 9 dwts. No. 2 winze 560 level south sunk 4 feet 9 inches, total 52 feet 6 inches. Lode 2 feet 6 inches wide, assay value 3 ounces 8 dwts. 21 grains. No. 3 winze 560 feet level south sunk 3 feet 9 inches, total 24 feet 9 inches. Lode 9 inches wide, assay value 12 dwts. No. 4 winze 460 feet level south sunk 4 feet 6 inches, total 85 feet. Lode 9 inches wide, assay value 12 dwts, 16 grains. The level north from back of No. 4 rise 280 feet level south driven 9 feet, total 114 feet. Lode 6 inches wide, assay value 1 ounce 3 dwts. 22 grains.—Wallroth's shaft sunk 9 feet 6 inches, total 1035 feet. Branch of quartz 9 inches wide, assay value 7 dwts. 15 grains. The 960 feet level south driven 27 feet, total 134 feet 6 inches. Lode 2 feet wide, assay value 16 dwts. 8 grains. No. 1 rise 960 feet level south risen 9 feet 3 inches, total 23 feet 6 inches. Lode 9 inches wide, assay value 6 dwts. 12 grains, communicated with No. 1 winze 860 feet level south. The 960 feet level north driven 2 feet 3 inches, total 74 feet 3 inches. Lode very small; no sample. The 860 feet level south driven 26 feet 3 inches, total 450 feet 6 inches. Lode 1 foot wide, assay value 4 dwts. 8 grains. No. 1 winze, 860 feet level south sunk 4 feet, total 91 feet 6 inches. Lode 9 inches wide, assay value 4 dwts. 17 grains, communicated. No. 2 winze, 860 feet level south sunk 5 feet 3 inches, total 33 feet 9 inches. Lode 1 foot 2 inches wide, assay value 11 dwts. 19 grains. The 860 feet level north driven 9 feet 3 inches, total 257 feet 6 inches. Lode pinched, no sample. No. 1 winze, 860 feet level north sunk 5 feet 3 inches, total 60 feet 6 inches. Lode 1 foot 6 inches wide, assay value 5 dwts. 10 grains. The 760 feet level south driven 31 feet 3 inches, total 580 feet 3 inches. Lode 1 foot 9 inches wide, assay value 6 dwts. 12 grains. No. 2 winze 760 feet level south sunk 5 feet 6 inches, total 39 feet. Lode 9 inches wide, assay value 4 dwts. 8 grains. The 760 feet level north driven 11 feet 3 inches, total 323 feet 9 inches. Lode small; no sample. No. 2 winze, 760 feet level north sunk 4 feet 3 inches, total 30 feet 9 inches. Lode 4 inches wide, assay value 7 dwts. 15 grains. No. 4 winze 660 feet level south sunk 2 feet 9 inches, total 74 feet. Lode 4 inches wide, assay value 3 ounces 5 dwts. 8 grains. No. 5 winze 660 feet level south sunk 1 foot 6 inches, total 101 feet. Lode 9 inches wide, assay value 4 dwts, 8 grains. No 7 winze 660 feet level south sunk 6 feet, total 10 feet 3 inches. Lode 2 feet 6 inches wide, assay value 2 ounces 3 dwts. 13 grains. In line winze 360 feet level south sunk 12 feet 6 inches, total 29 feet 6 inches. Lode 6 feet wide, assay value 13 dwts. 2 grains. The 360 feet level north driven 9 feet 6 inches, total 417 feet 9 inches. Lode small, no sample. The 280 feet level north driving north on fold driven 15 feet 6 inches, total 217 feet. Lode 1 foot wide, assay value 9 dwts. 21 grains. No. 5 winze 215 feet level north sunk 5 feet, total 30 feet 3 inches. Lode 9 inches wide, assay value 16 dwts, 8 grains.—Low's shaft. Sunk 5 feet 6 inches, total 712 feet 10 inches. This is sufficiently deep for the 710 feet level, which has been commenced south. The 610 feet level south driven 11 feet, total 233 feet 6 inches. Lode 1 foot 6 inches wide, assay value 12 dwts. The 610 feet level south driving north on lode from the point of intersection driven 14 feet 3 inches, total 58 feet. Lode 6 inches wide, assay value 1 ounce 1 dwt. 19 grains. No. 1 winze 610 feet level south sunk 7 feet, total 13 feet. Lode 3 feet wide, assay value 7 dwts. 15 grains. Probyn's shaft sunk 7 feet, total 1088 feet. The 1050 feet level south driven 13 feet 6 inches, total 45 feet 6 inches. Lode 3 inches wide, assay value 6 dwts. 12 grains. No. 1 winze 1050 feet level north sunk 5 feet 6 inches, total 31 feet 6 inches. Lode 6 inches wide, assay value 8 dwts. 17 grains. No. 1 winze 950 feet level south sunk 3 feet, total 79 feet. Lode 1 foot wide, assay value 6 dwts. 12 grains.—Stopes for month—Taylor's shaft. Bottom of 560 feet level south stoped 18¾ fathoms. Lode 1 foot 9 inches wide, assay value 2 ounces 18 dwts. 19 grains. Bottom of 460 feet level south stoped 2 fathoms. Lode 2 feet 6 inches wide, assay value 15 dwts. 6 grains. Bottom of 360 feet level south stoped 40¾ fathoms. Lode 4 feet 4 inches wide, assay value 14 dwts. 17 grains. Bottom of level south from back of No. 4 rise 280 feet level south stoped 6 fathoms. Lode 2 feet wide, assay value 1 ounce 11 dwts.—Wallroth's shaft. Back of 660 feet level south stoped 46¼ fathoms. Lode 2 feet wide, assay value 18 dwts. 4 grains. Bottom of 660 feet level north stoped 6¼ fathoms. Lode 3 feet 3 inches wide, assay value 8 dwts. 3 grains. Bottom of 560 feet level south stoped 6¾ fathoms. Lode 5 feet 9 inches wide, assay value 2 ounces 4 dwts. 2 grains. Back of 560 feet level south stoped 26¼ fathoms. Lode 2 feet 4 inches wide, assay value 19 dwts. 7 grains. Bottom of 560 feet level north stoped 5¾ fathoms. Lode 1 foot 6 inches wide, assay value 1 ounce 19 dwts. 17 grains. Bottom of 460 feet level south stoped 46¼ fathoms. Lode 2 feet wide, assay value 1 ounce 3 dwts. 23 grains. Back of 460 feet level south stoped 9¼ fathoms. Lode 2 feet 6 inches wide, assay value 8 dwts. 17 grains. Bottom of 460 feet level north stoped 3¾ fathoms. Lode 1 foot 6 inches wide, assay value 2 ounces 3 dwts. 13 grains. Bottom of 360 feet level south stoped 43 fathoms. Lode 2 feet 3 inches wide, assay value 1 ounce 11 dwts. 8 grains. Back of 360 feet level south stoped 1¼ fathom. Lode 1 foot wide, assay value 1 ounce 1 dwt. 19 grains. Bottom of 360 feet level north stoped 5¾ fathoms. Lode 2 feet 6 inches wide, assay value 14 dwts. 4 grains. Bottom of 280 feet level south, stoped 3 fathoms. Lode 2 feet 6 inches wide, assay value 2 ounces 1 dwt. 9 grains. Bottom of 215 feet level south stoped 3¾ fathoms. Lode 1 foot wide, assay value 7 dwts. 15 grains. Bottom of 215 feet level north stoped 19 fathoms. Lode 1 foot 4 inches wide, assay value 1 ounce 10 dwts. 4 grains.—Low's shaft. Bottom of 430 feet level south stoped 13 fathoms. Lode 1 foot wide, assay value 15 dwts. 8 grains. Back of intermediate level north, back of 200 feet level south, stoped 4¾ fathoms. Lode 6 inches wide, assay value 7 dwts, 15 grains.—Probyn's shaft. Back of 650 feet level south stoped 1¾ fathom. Lode 1 foot 6 inches wide, assay value 10 dwts. 21 grains. Back of 450 feet level south stoped 4¾ fathoms. Lode 1 foot wide, assay value 2 ounces 10 dwts. 1 grain.—No. 2 trial shaft. Stoping south of shaft at 230 feet stoped 4¾ fathoms. Lode 3 feet 6 inches wide, assay value 7 dwts 15 grains.—Stoping north of shaft at 230 feet. Stoped 6¼ fathoms. Lode 3 feet 6 inches wide, assay value 8 dwts. 17 grains.—Exploratory work. Wallroth's shaft. The crosscut east from 760 feet level south driven 9 inches, total 56 feet 3 inches. The crosscut west from 760 feet level south driven 1 foot 6 inches, total 57 feet 6 inches. The level south from crosscut east from 280 feet level south driven 1 feet 3 inches, total 57 feet 3 inches, suspended. The crosscut east from 280 feet level south resumed, driven 2 feet 3 inches, total 268 feet 9 inches.—Munday's lode explorations. The 280 feet level north from crosscut west driven 1 foot 9 inches, total 44 feet 9 inches. The lode is very disordered and contains but little quartz, hence it is suspended. The crosscut west from 280 feet level south resumed and driven 10 feet, making its total distance 543 feet 6 inches. The crosscut east 215 feet level north driven 3 feet, total 9 feet 6 inches. No discovery.—Probyn's shaft. The level north from crosscut east 450 feet level south driven 9 feet, total 56 feet 6 inches. The lode varies in its width from 3 to 6 inches. A sample from which gave by assay 10 dwts. 21 grains of gold per ton. During the month of April we crushed 4066 tons of quartz which produced 4652 ounces of gold. In addition to this 4711 tons of tailings were treated which yielded 956 ounces of gold, total return 5608 ounces of gold.

SAM'S WEALTH OF NATIONS GOLD AND EXPLORATION.—A circular to the shareholders states: Our manager at Coolgardie reports that on testing the ironstone casing in No. 1 shaft a very rich prospect was obtainable, equal to at least 5 ounces to the ton. As regards the company's Plutus Consolidated Mines, the superintendent cables:—Have struck a seam of stringers of rich ore north side of creek, and that crushing has commenced from the 10 feet reef on the southern part of the property. The reef is traceable for a considerable length, and is believed to be very rich. The result of the crushing will be made known as soon as cabled.

WENTWORTH EXTENSION.—Report dated April 20: Carrol shaft No. 1 crosscut advanced 10 feet, total length 39 feet; face in hard diorite with quartz seams. East crosscut in 56 feet, progress during the week 8 feet through diorite. Trenching continued without change. New shaft started.

BREMNAES GOLD.—The following report has been received from the manager, Mr. John Daw, jun., dated Haugesund, May 24: Owing to the holidays, we have very little to report this week. On section 4 there is no alteration to note, the general appearance of the lode is very encouraging, and promises well for future developments.—Section 5. We have drained the upper workings, and are arranging for a thorough test of the ground opened. We find that no stoping of any importance has been done, and that, practically speaking, all the ground is intact to surface. I broke a stone showing gold from some of the exposed quartz, and hope soon to give the assay value as detailed in our last report. Next week we shall fix boiler to drain the lower workings in this section, which are about 150 yards south of main shaft on section 4, and if we find these workings to be on the same lode as the workings in section 4, the value of the property will be very considerably enhanced. The sale of the surplus machinery purchased with the new property is fixed to take place on June 19 and following days.

LOMA.—The secretary has received advices from Mr. William St. David Griffith, written under date April 21, stating that he took over the management of the company's property on April 5. From the appearance of the gravel in El Tablazo Mine, he thinks there should be a good clean-up from the next run. The gravel, however, is very patchy. There is a good face of ground in the Soto Mine, which should give good results. Mr. Griffith advises the company to later on work the adjoining Esperanza Mine. The reservoir he considers a work it is most important to complete. This will still take two months to finish, as it has been impossible to get men to work in this district during the revolution. It will, however, now be pushed ahead as fast as possible. All ditches are now completed. The annual general meeting will be held in the autumn, by which time Mr. Griffith hopes to have an encouraging report to offer.

THE LINOTYPE COMPANY, LIMITED.

The linotype rapidly increasing in favour.—A successful year's working.

The sixth annual general meeting of the shareholders in the Linotype Company (Limited) was held on Monday at the Cannon-street Hotel, the chair being occupied by Mr. JOSEPH LAWRENCE, deputy-Chairman of the company.

At the outset of the proceedings the CHAIRMAN read a letter from the Right Hon. Jacob Bright, M.P. (Chairman of the company), regretting his inability, owing to illness, to be present at the meeting. "To-morrow," said Mr. Bright, "will be a great day for our fellow-shareholders. Much more has been accomplished than at one time they anticipated. They have now an easy future before them, and it appears to me that nothing can prevent the full development of the company." (Applause.) He (the Chairman) was sure he expressed the feelings of his colleagues and of the shareholders when he placed on record their deep regret at the absence of Mr. Bright. (Hear, hear.)

The SECRETARY (Mr. W. H. Lock) read the notice convening the meeting.

The CHAIRMAN said: Ladies and gentlemen—My first duty to-day is to congratulate you, on behalf of the directors, upon the issue of our operations for the year 1894. Probably I may save your time by indicating at the outset the order of procedure in the transaction of our business to-day. First, I propose to move the reception and adoption of the report and accounts, and, after discussion, to put the motion; then to take the motions for the declaration of a dividend and the re-election of officers; and, lastly, to place before you the proposal of the board with regard to the finances of the company. And in the first place I want to say on behalf of the board that we think the time has now come when the meetings of the company should be held at an earlier date in the year. (Hear, hear.) Hitherto we have kept the precedent established six years ago, the meetings being always held in the month of May. At that time, as you are probably aware, the bulk of the shareholders consisted of leading newspaper proprietors and printers throughout the country, and these gentlemen holding their conferences and meetings in London in the month of May, it was largely for their convenience that this arrangement was made. There is no reason why the accounts of the company, which are made up to December 31, should not be printed and presented to the proprietors in March, and we propose next year to commence the practice of holding the annual meeting before the end of March. (Hear, hear.) The report and accounts speak for themselves; they are pretty voluminous. We have given the shareholders every information in our power, because we felt that unless the shareholders were thoroughly in accord with us, not only as to our policy, but as to the details of our business, we had very little prospect of conducting this concern, under great difficulties, to a successful issue. In the first place, I wish to remark that the recommendation of the directors to pay this year a 5 per cent. dividend is going to be a real recommendation inasmuch as we intend to pay cash. (Applause.) Last year we were obliged to trespass on your indulgence and forbearance to the extent of asking you to hold over for two years payment of the dividend which was then declared, and we gave dividend warrants payable in two years for that purpose. We are in hopes, if certain recommendations which we are about to make to you are carried out, that we shall be able to take up these warrants before the 31st December next. (Hear, hear.) I see in the room Mr. W. H. Roberts, one of our original shareholders, who when he took up shares in the company six years ago, said: "Though I thoroughly believe in this concern, and believe in every word in the prospectus, I'll give it five years before it pays a dividend." Mr. Roberts has proved himself a true prophet, because it was not until we had completed our fifth year that we were able to make a bare showing of a dividend of 2½ per cent. To-day we are able to declare honestly a dividend of 5 per cent., and I hope that next year, if the indications that present themselves to us at the present moment are realised, we shall be able to maintain at least that dividend. It is unwise to prophesy unless you know, and we have not been given to prophesy unduly on this side of the table since the company started. We have had to bear up under great difficulties and a great amount of obloquy. We felt that there was only one royal road to success, and that was in earning a dividend before we paid it. (Hear, hear.) We have striven amidst many difficulties to earn that dividend, and we believe now that we are not only on the high road to maintain the dividend we have declared to-day, but possibly—indeed, probably—in the future to increase it. Arising out of the report is the question of paying off of our debts. We were saddled at the outset, in consequence of the insufficiency of our share capital, with oppressive debenture debts. We have commenced redeeming the first debenture debt of £50,000, and it is practically all paid off. (Applause.) The next thing under the head of debentures we propose to pay off (if certain recommendations which I have alluded to before are carried out) is the balance of those debentures; this will be done by paying off another £50,000 on January 1 next, and we have made such provisional arrangements, subject to your sanction, as will enable us to do so. Our general policy is to relieve this undertaking as much as possible from debenture debt, or any debts which may place it at the mercy of anyone except the ordinary shareholders. (Applause.) I might incidentally refer to the founders' shares, which is a very vexed and troublesome question, and one which we want to face. We have faced a great many difficulties in the past, and we want to face this before it becomes unmanageable. The probability is that these shares will go up considerably in price, and we do not want to repeat the mistakes of other undertakings which have bought founders' shares back at fabulous and unreasonable prices. We want, if we can, between this and next year to agree upon some equitable basis for extinguishing those shares in some form or other which we are not to-day prepared to propound. We have our own ideas, but I need only say that no injustice will be done to the holders of those shares. Now, as regards our business generally, there are only two factors that we need concern ourselves with. The first is the willingness of printers and newspaper owners to hire or buy our machines, and the second is the reasonableness of the trade unionists who operate those machines. During the past year we have had to spend money in the establishment of training schools, and in making arrangements for supplying printers and users of machines with efficient operators. We tried the policy of conciliation for five or six years with the trade unionists, but they did not meet us in a corresponding spirit. The consequence was that when matters got to a pretty acute stage at the *Daily Telegraph* office we took the bull by the horns, and threw open our training school to the world at large. We were anxious to work peaceably with the trade union compositors, and we were compelled reluctantly to act as we did. The result is that to-day we have got a sufficient supply of labour, and we are able to supply any newspaper owner or printer in London with trained compositors at a lower rate of wages than the trade unionists, in my opinion, unwisely and unjustly insist upon. (Applause.) The consequence is that, at least so far as London is concerned, we do not run the risk of our industry being throttled by trade unionist combination. I might say one word regarding this vexed question of the displacement of labour. Everyone knows that when railways were introduced into this country all sorts of lamentations were indulged in as to the possibility of horses being extinguished. Still, to-day there are more horses employed in various businesses in England than there were before railways were introduced. So it will be with compositors; they know very well that combinations of trade unionists have always, so far as history tells us, been ineffectual to stop permanently the introduction of a genuine labour-saving appliance—(applause)—and I wish it to go forth from this meeting that we, as trustees of your interests, and as guardians of your property, mean to act firmly, but justly, in the future in our relations with the various bodies, whether the Amalgamated Society of Engineers or the compositors; but, at the same time, we do not mean to submit to any nonsense in regard to the rate of wages they choose to dictate to us. (Applause.) I might say that we are not dependent entirely upon the supply of labour from England. It will probably be news to most here that some of our best employees are not natives of this country. We have to pay Americans, Swiss, Germans, and mechanics from even that far-off little country—Iceland—to supply us with our requisite labour. Of course, the preponderating proportion is English labour—nine-tenths of it—but it may also be said, to the discredit of English labour, that our best mechanics are men from distant countries, to whom we pay wages from £8 to £12 per week, whereas we pay the ordinary British mechanic £2 10s. There is no doubt that we have reached a landmark in our history to-day. Those who issued the prospectus to the public inviting subscriptions to the share capital of this company, held out one material inducement—namely, that the linotype machine would set up type at six times the speed that was then attained by hand compositors. We are able to-day to say that that forecast has been more than realised, and that whereas hand-labour did 1000 "ens" per hour, corrected and distributed matter, this machine is supposed to do 6000 "ens." There have been records made here in this City of London of 9000, 10,000, and even 14 000 "ens" per hour. A record has been made by individual operators of 18,000 "ens" per hour, but in an office like the *Leeds Mercury*, where there are 20 machines employed, the average speed attained by a body of men, taking the good and the bad together, during a period of six, nine or twelve months, has varied from 7000 to 8000 "ens" per hour, therefore the material inducement held out in our prospectus has been more than fully realised. (Applause.) As to the prospects of business in the future, we have the experience of America. Offices that were closed to us six months ago are now being opened to us, and I speak in the presence of the President of the Newspaper Society (Mr. Madge), who will tell you that throughout the whole body of newspaper proprietors it is now recognised that the linotype machine is the machine, and that they will always have it. (Applause.) Consequently, it is only a matter of time and patience. I and my colleagues are certain that there will be no retrogression in regard to our business. In the first place we mean to make it a success; we do not intend debenture-holders or anyone else to come in and wipe out the industry that we are building up. (Hear, hear.) In the second place, we are adding to our monopoly—for it is a monopoly of a very extensive and very valuable and comprehensive character—every day. Our eyes and ears are always open, and we are never asleep in our efforts to perfect this powerful monopoly, and whether we reap the fruits of it next year or the year after, those fruits are bound to come. We do not mean to let a second man come on the scene if we can help it, or a second organisation; therefore, it is with every confidence that I say we have now reached a permanent landmark in our history. I received a letter two days ago from a prominent director of the American company, and he tells me that in America they are engaged in building a machine for book-work, which will transcend in results even the great achievements of existing perfect linotype. We are entitled to the benefit of that machine when they have tried it and brought it to a state of success, but long before that we shall have protected it in this country by provisional rights. On this side also, we are bringing out patents every day, all of which are designed to perpetuate what, for want of a better word, I call the monopoly we have established. Since our last meeting a settlement has been granted by the Stock Exchange in our shares. We, as directors, are not supposed to concern ourselves with what passes on the Stock Exchange, but we have had officially to supply the Stock Exchange Committee with details as to our past history and reports, and after investigating all these matters they have granted us a settlement. With these observations I commend for your acceptance the motion for the adoption of the report and accounts. The fact that in two years our shares have risen from 10s. to £4, and that we are now able to pay a dividend of 5 per cent., should, I think, prompt you to accept the motion without hesitancy.

Mr. A. M. HAINES seconded the motion.

Mr. MADGE, President of the Newspaper Society, having congratulated the shareholders on the enhanced value of their shares in the market, and the substantial nature of the dividend to be declared, spoke of the successful working of the machines in two offices which were under his observation. Experience told him that the operator of ordinary skill could produce from 7000 to 8000 "ens" per hour, while in particular cases this number was far exceeded. It was no secret that in the office of one of the leading London evening newspapers, by the use of the linotype machines a saving was effected of nearly 40 per cent. in the labour cost. In conclusion, he congratulated the directors on the able management they had brought to bear on the undertaking, and he thought he expressed the feeling of all the shareholders when he said they were very gratified with the statement put before them. (Applause.)

Mr. STEWART WALLACE, M.P., said he had a peculiar pleasure in being present, and in speaking that day, for three or four years ago, when things with them were not so pleasant, he endorsed the management of the directorate, and emphasised his belief that, while they had many difficulties to overcome, the way in which they had managed the business up to that date enabled him to speak with confidence with regard to the ultimate issue of their efforts. (Applause.) The position of the company now was a very sound one. To start in opposition to them would require a capital of half a million to one million pounds sterling, and he thought no capitalist would enter upon such an enterprise. He would venture on a second prophecy to the effect that they had only as yet received an earnest of what was in store for the company from this extremely valuable invention, and he congratulated the directors upon the success which had attended their efforts. (Applause.)

Mr. HERBERT PRAED, who acknowledged that in the early days of the company he had had some doubts as to the ultimate success of the machine, heartily congratulated the directors upon the success to which they had brought the linotype.

The CHAIRMAN, speaking in answer to Mr. PEARCE, said the company's patents were practically perpetual in their duration.

The motion for the adoption of the report and accounts was then put, and carried unanimously, amidst applause; and a further resolution, declaring a dividend of 5 per cent. for the year, payable June 25, was also agreed to.

The retiring director, Mr. Howe Bemrose, J.P., was unanimously re-elected, and the auditors, Messrs. Cooper Brothers, reappointed.

The CHAIRMAN then submitted a resolution empowering Messrs. Jacob Bright, M.P., and Joseph Lawrence, the surviving trustees of the trust deed dated August 22, 1891, to sell the whole of the shares in the company held by them under the trust of the said deed, explaining that the shares were those surrendered by the vendors some few years ago; the only condition being that when they were sold the proceeds should be applied to the benefit of the company. The directors had now an opportunity of placing those shares on fair terms with substantial parties, and the money so obtained would enable the board to entirely free the company from debenture debt and other liabilities, and build a new factory.

On the motion of Mr. H. BEMROSE, seconded by Mr. ROBERTS, a resolution formally empowering the trustees to take this step was unanimously carried.

A hearty vote of thanks to the directors and officers terminated the proceedings.

CAPE GOLD EXPORT.—Cape Town, May 29: Gold to the value of £75,837 is being taken to Europe by Messrs. Donald Currie and Co.'s steamer *Roslin Castle*.

QUEENSLAND GOLD YIELD.—The yield of gold for the colony for the quarter ended March amounted to 135,461 ounces, against 130,438 ounces for the corresponding period of last year. The following were the principal yields:—Charters Towers 58,703 ounces, increase 3993 ounces; Rockhampton Fields 27,344 ounces, increase 2380 ounces; Croydon 16,250 ounces, increase 2998 ounces; Gympie 14,906 ounces decrease 5321 ounces; Etheridge 6509, increase 2390 ounces.

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

MR. SAMUEL JOHN DAVEY, Dealer in Cornish Mine Shares, Redruth, Cornwall, reports under date of May 30 (four o'clock) as follows:—Business has been quiet in our market this week, and prices have not changed very much. There is but very little doing to-day. Following are quotations:—Blue Hills, ⅞ to 1⅛; Carn Brea, 2⅞ to 3⅛; Dolcoath, 48 to 50; East Pool, 6 to 6¼; Killifreth, 9s. to 11s.; South Condurrow, ⅛ to ⅜; South Crofty, ¾ to 1; South Wheal Frances, 12s. to 15s.; Tincroft, 7½ to 8; West Frances, 1 to 1¼; West Kitty, 6 to 6½; Wheal Basset, 1¼ to 2; Wheal Grenville, 12 to 12½; Wheal Kitty (St. Agnes), ⅛ to ¼; Polberro, 1 to 1½.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (May 30) as follows:—The mining market has been dull and inactive on the further decline of the tin standard and heavy advices of statistics for end of the month. Prices remain much the same:—Blue Hills, 16s. to 17s. 6d.; Carn Brea, 2⅞ to 3; Cook's Kitchen, ⅛ to ⅜; Devon Consols, 32s. to 33s. xd.; Dolcoath, 49½ to 50; Drakewalls, 2s. 6d. to 2s. 9d.; East Pool, 5¾ to 6; Killifreth, 10s. to 11s. 6d.; Levant, 5¾ to 6; Polberro, 18s. 6d. to 20s.; South Crofty, 16s. to 17s. 6d.; South Frances, 16s. to 17s. 6d.; Tincroft, 7½ to 7⅝; West Frances, 1¼ to 1½; West Kitty, 6 to 6½; Wheal Basset, 1⅝ to 2; Wheal Friendly, 1s. 6d. to 2s. 6d.; Wheal Grenville, 12½ to 12⅝; Wheal Kitty, 2s. 6d. to 3s. 6d.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers and Mining Share Dealers, Redruth, write under date of Thursday, May 30:—In spite of weakness in the tin market the Cornish Share Market has maintained a firm tone during the past week, several shares being better at the close. Dolcoaths have been quieter and close easier, but Carn Breas, Tincrofts, and Wheal Grenvilles have been a good deal in demand, and stock generally has been scarce. Quotations herewith:—Blue Hills, ⅞ to 1; Carn Brea, 2⅞ to 3⅛; Cook's Kitchen, ⅛ to ⅜; Dolcoath, 49 to 50; East Pool, 5¾ to 6¼; Killifreth, 9s. to 11s.; Polberro, 1 to 1½; South Crofty, ¾ to 1; South Frances, ⅛ to ⅜; Tincroft, 7½ to 8; West Frances, 1 to 1½; West Kitty, 6 to 6½; Wheal Basset, 1½ to 2; Wheal Grenville, 12½ to 13; Wheal Kitty, ⅛ to ¼. Tin, 64½.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers Queen's Chambers, 7, Market-street, write May 30 (noon):—Though far below that of previous weeks, the volume of business has been fair, although, owing to it's mainly having been the result of endeavours to "shorten sail" in view of holidays, prices have had a drooping tendency nearly all the week. Depression has been the prevailing feature, but there have been periods rather brighter and better in tone, and where some previous depreciation has been recouped, consequently the actual losses on the week are not particularly large in any section save Mexican Rails. As regards home rails, as a matter of fact advances are rather in excess of declines. Americans are very generally lower, but having shown some decent rallies on lowest points, the balance of movement in the stocks active here—though all on the lower side, with the single exception of Milwaukees, which are 8⅜ higher—show nothing of any consequence in amount of fall, save for drop of 8½ in Erie. Mexicans have had a serious relapse, the Ordinary being 2½ First Preference 6, and Second Preference 3½ down. A different record is found for Canadians, all issues of which are better. Pacifics are 1⅜. Trunk Guaranteed and First Preference 1 each, Second Preference ½, Third Preference ⅜, and Ordinary ¼ to ½ higher. Turning to daily details regarding rails. Friday last was a very quiet day, though some Americans, Canadian Pacifics, and Chatham Ordinary all showed more than isolated dealings. Changes, whilst small, were mostly in an upward direction in home rails, Canadians, and Yankees, but Mexicans fell away, especially the First Preference. Saturday brought but little business, as usual, but prices were firm generally, though nothing much in amount was marked, Mexicans again an exception, falling severely, particularly the preferred issues.—Monday: But little doing. Home rails unaltered, except for Brighton A and Dover A, which were better, the latter more especially (gaining ¾). Americans began well, and remained steady to firm all day. In Canadians Trunks were better, but Mexicans remained on the down grade. On Tuesday prices fell away all round the several departments save for Trunks, which were again a bit better on a traffic return showing an increase, an exceptional thing for them for a very long while. Americans were forward in the downward movement, and amongst them Louisvilles were prominent, falling $1⅛, other losses ranging from $⅛ to $⅜. Yesterday markets are again on the lower tack, Canadians alone just about holding their own. Traffics in home rails, which were very irregular, had no influence in prices. This morning home rails opened without any material change from last night's close. There are one or two differences of ⅛, but they are divided between higher and lower. Americans begin better all round on better New York figures. Canadians, too, show some improvement from yesterday. Consols show no change on the week. In Colonials the only quotable change is a rise of ¼ in New Zealand Inscribed. Home corporation stocks mark advances of 1 in Bristol Three and a-Half per Cent., and ¼ to ⅜ in Manchester Four Cent., and these are the only changes to record. Foreigners are irregular.—Higher: Argentine Six per Cent. 1, ditto Five per Cent. ⅛, Italian Rentes ⅛ to 1, Brazilian Four and a-Half per Cent. ⅛ to 1⅛, Mexican Six per Cent. ⅛, Portuguese Four per Cent. ⅜, and Russian Four per Cent. ⅛.—Lower: Turks 1, ditto D ⅛, Spanish Four per Cent. ⅛, and Egyptian Unified ⅛. As regards miscellaneous markets generally, beyond some repaired business in British South Africas and Ship Canals the transactions of the week reach but a very poor total, but as regards changes in quotations it may be sufficient to say that in nearly, if not all, sections of the miscellaneous classes the balance of alteration is on the side favourable to holders. Manchester Ship Canals, after being lower, have latterly ranged back to prices of a week ago. Prominent gas light stocks have been well appreciated in value, Imperial Continental being 5, and Gas Light and Coke A 3 to 4 up.

LATER (4 P.M.).—Home rails, excepting for small gains on London and North-Western and North-Eastern, are practically unchanged to-day. Americans and Canadians a little stronger, but very little business doing in any department. Ship Canals have given away a little to-day from their recent rally, but still show very small changes on the week. Though the changes have not occurred to-day we may supplement previous remarks by saying that iron shares are, on the whole, better on the week.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (May 30) writes:—During the past week markets have been less active. Prices declined partly owing to liquidation sales and buyers holding aloof on account of approaching holidays. The fortnightly Settlement was arranged more smoothly than was expected, and transactions now entered into are for account June 12—a 19 days' account.

In shares of coal, iron, and steel companies prices are generally lower. Niddrie have improved to 44s. 6d. on the dividend announced at 4s. per share, which compares with 4s. 3d. per share last year. African Coal are at 8s. 6d.; Addie and Co. Preference, 9 15 16; Marbella, 50s.; Steel Company, 54.

In shares of copper concerns a considerable amount of business has been done. Tharsis have been sold from 97s. 3d. to 100s. 6d. Tinto declined from 16 9-16 to 15⅞, but are now a little better.

Arizona are at 28s. 6d., and Mason 58s. 9d.; Drakewalls Tin offered at 2s. 3d.

In shares of gold and silver mines a large amount of business has been done. Prices are generally lower on various sales. Chartered declined from 79s. 9d. to 68s. 9d., East Rand from 97s. 6d. to 77s. 6d., Klerksdorp 26s. to 16s. 6d., Randfontein 45s. to 37s. 6d., and Roodepoort Deep from 83s. to 70s. George and May show a heavy fall at 20s. on rumoured financial difficulties. Broken Hill declined from 45s. to 42s. 6d., although the usual dividend of 1s. is declared payable June 19. Among Indian mines, Champion Reef and Ooregum have improved, but the others are lower, although returns are likely to receive benefit soon from the cyanide treatment. Nundydroog lower at 35s., as it is understood they are passing through some poor ground, but they have large reserves of quartz. Mysore Gold Fields are also lower, although they have sold the Oriental Block to a new company for £62,500 in cash and shares. Lydenburg Transvaal and Swazi Gold wanted. Afrikander are at 30, ex rights; Achilles, 4s. 1½d.; African Consolidated, 5s. 6d.; African Recovery, 30s.; Anglo-Mexican, 13s.; Big Golden Quarry, 2s. 6d; Balkis Eersteling, 3s. 9d.; Blue Spur, 2s. 3d.; Bayley's Reward, 10s. 6d.; Buffelsdoorn, 97s. 6d.; Cæsar, 45s.; Coolgardie Sherlaw's, 17s.; Caratal, 1s. 3d.; Dickens Custer, 2s. 6d.; Doornkop, 8s. 9d.; East Sheba Reef, 2s. 6d.; Empress of Coolgardie, 13s. 9d.; Guy Fawkes, 12s. 6d.; Gold Fields Deep, 6¾; Graskop, 6s. 9d.; Glencairn, 77s. 6d; Golconda, 22s.; Gwelo, 5s. 6d.; Great De Kaap, 3s. 6d.; Jay Hawk, 2s.; Joe's Reef, 15s.; Hauraki, 10s.; Johannesburg Investment, 78s. 9d.; Jumpers, 4¾; Klerksdorp, 19s. 6d; Knight's, 8; Loma, 2s.; Luipaard's Vlei, 17s.; Londonderry, 12s. 6d.; May, 61s. 3d.; Mallina Consols, 4s. 3d.; Mozambique, 27s. 6d.; Mawson's Reward, 18s. 9d.; Mallina, 16s.; New Queen, 7s. 6d.; Oceana Land, 47s. 6d.; Oceana Development, 28s. 9d.; Orion, 68s. 9d.; Ottos Kopje, 6d.; Rhodesia, 8¾; Randfontein, 40s.; Rothery Block, 21s. 3d.; St. John del Rey, 31s.; Sheba Queen, 5s. 6d.; St. Augustine, 13s. 6d.; Springdale, 3s.; Sutherland Reef, 6s. 6d.; South Luipaard's Vlei, 3s.; Thistle Reef, 5s.; Transvaal Gold, 5; United African Land, 7s.; Violet, 21s. 3d.; Van Ryn, 8¾; Victoria and Altamira Preference, 2s. 9d.; West Australian Exploring and Finance, 27s. 6d. to 30s.; Willoughby, 26s. 3d.; and Wolhuter, 6¾.

In shares of miscellaneous companies there has not been much business doing. Oil companies shares are generally lower in sympathy with the market for sulphate of ammonia. Broxburn are at 12 7-16, Hermand 2s. 6d., Pumpherston 9, and Young's 43s. 6d.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of May 30:—Business has been very quiet during the past week, and prices in nearly every department have declined. Caledonian Railway deferred stock has declined from 46 3 16 to 45 13-16, North British from 40 15-16 to 40. Railway debenture and other high-class securities are in demand at enhanced prices. Canadians stronger, Americans weaker. In bank stocks Royal has improved from 222 to 225½, Clydesdale from 19½ to 19 5-16. Town and County have receded from 19 3-16 to 19. In insurance shares Commercial Union have advanced from 35⅝ to 36, Edinburgh Life from 51½ to 52, Life Association from 40½ to 41½, Northern from 69½ to 69⅝, Scottish Life from 40s. to 41s, Thames and Mersey from 11¾ to 12, British South Africa (Chartered) shares, after many fluctuations, leave off at 74s., being a fall of 1s. 6d. Edinburgh American Land are wanted at 4s., a rise of 1s. Realisation and Debenture Corporation have risen from 8s. to 11s., Scottish American Investment from 73s. 6d. to 74s. Scottish American Mortgage from 57s. to 59s. Financial Trust stocks are in favour at advanced prices. Niddrie and Benhar Coal are 2s. up at 44s. 6d. Tharsis 1s. 6d. lower at 98s., Rio Tinto 2s. 6d., lower at 15 13 16. Oils quiet. Pumpherston 3-16 lower at 8½, Youngs 1s. 6d. lower at 43s., Holmes 10s. lower at 30s. Hermand 3d. higher at 2s. 3d. Distillers 6s. 3d., higher at 17¾. Western Ranches 3s. higher at 93s. Coates 6s. 3d lower at 23 11-16.

BRITISH GUIANA'S GOLD INDUSTRY.—The gold entered at the Custom House, Georgetown, on the 2nd ult. for shipment per the R.M.S. *Esk*, amounted to 3828 ounces 1 dwt. 13 grains to the value of $83,059·23 [as compared with the previous shipment of 6319 ounces 18 dwts. 13 grains to the value of $111,131·65. With this addition the total output for the year amounts to 34,916 ounces 9 dwts. 1 grain to the value of $638,067·92. The following is the return of gold entered at the office of the Department of Mines for the week ending May 4;—

	Ozs.	dwts.	grs.
Barima	370	11	11
Barama	138	8	23
Cuyuni	758	6	18
Groete Creek	14	7	7
Puruni	154	18	23
Essequebo	435	17	14
Potaro	573	10	7
Total	2445	16	7

The exports of gold from January 1 to May 13, 1895, amounted to 34,916 ounces 9 dwts. 12 grains at $618,067·92, as against in 1894 33,655 ounces 13 dwts. 11 grains at $600,828·99, an increase of 1260 ounces 16 dwts. 1 grain in quantity, and $17,238·93 in value.

LOW PRESSURE CURRENTS IN METALLURGY.—More than a year ago we called attention to some interesting laboratory experiments made by J. Garnier, and described by him in a paper contributed to the *Proceedings* of the Paris Academy of Science, in which he showed that an electric current of low pressure can be employed in the "cementation" process for heating iron. The results were suggestive, and at the time we ventured to express the hope that Garnier would explore this particular field of research more completely. He appears to have done so, and amongst other results he has thrown light upon the electro-chemistry of fused sulphide ores. It appears that when the sulphides of the metals are treated with low pressure electric currents the sulphur is eliminated. The percentage of sulphur seems to diminish from the anode to the cathode, whilst the percentage of metal increases in the same direction. Really it would appear that, given that this application of electricity can be made with sufficient economy, we are on the eve of some revolutionary discoveries in connection with the winning of the metals from their natural ores.—*Electrical Review.*

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THE PESTARENA UNITED GOLD MINING COMPANY (LIMITED).

TEN PER CENT. SECOND MORTGAGE DEBENTURES.

NOTICE IS HEREBY GIVEN that the Coupon No. 35, of the Ten Per Cent. Second Mortgage Debentures of this Company, due on the 1st June, 1895, WILL BE PAID on presentation at this Office on or after that date.

By Order of the Board,
RICHARD GARLAND, Secretary.

Office, 7, Queen Street Place, London, E.C.
May 29, 1895.

THE CAPE COPPER COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that at a Meeting of the Directors of this Company, it was resolved—

"That a Dividend of 1s. 3d. per share be declared on the Cumulative Preference and Ordinary Shares, free of Income Tax, payable on the 1st day of July, 1895, to the Shareholders on the books of the Company on the 5th day of June, 1895, and that the Transfer Books be CLOSED during the said 5th day of June, 1895."

Preference Coupons No. 7, and Ordinary Coupons No. 19 WILL BE PAID at the above rate, free of Income Tax, on presentation at the Company's Office.

By Order of the Board.
J. C. LEAVER, Secretary.

9, Queen Street Place, London, E.C.
May 29, 1895.

COLONIAL BANK.

(Incorporated by Royal Charter, 1836)

Subscribed Capital	£2,000,000
Paid-up	600,000
Reserve Fund	150,000

THE Court of Directors of the Colonial Bank hereby give notice that, in pursuance of the provisions of the Charter, a HALF-YEARLY GENERAL MEETING of Proprietors will be HELD at the Bank House, No. 13, Bishopsgate Street Within, London, E.C., on THURSDAY, July 4th, 1895, at Two o'clock precisely, to receive the Report of the proceedings of the Corporation.

The Transfer Books of the Corporation will be CLOSED on June 19th, 1895, and RE-OPENED on July 10th, 1895.

By order of the Court of Directors,
EDWARD CARPENTER, Secretary.

13, Bishopsgate Street Within, London,
30th May, 1895.

THE NERBUDDA COAL AND IRON COMPANY (LIMITED).

NOTICE is HEREBY GIVEN that the THIRTY-FIFTH ORDINARY GENERAL MEETING of the Company will be held at the Offices of the Company, 213, Gresham House, Old Broad Street, London, E.C., on Tuesday, the 11th June next, at 12 o'clock noon, for the transaction of the General Business of the Company, including the Election of Directors and Auditor.

The Transfer Books will be closed from Saturday the 1st to Tuesday the 11th June next, both days inclusive.

By order of the Board,
FREDK. R. BLUETT, Secretary.

213, Gresham House, Old Broad Street, E.C.,
28th May, 1895.

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†Tartar	—	—	—	June 8
*Trojan	—	June 4	June 5	June 15
†Norman (t'n s'w)	—	—	—	June 22
*Gaul (twin sc w)	June 13	—	June 22	June 29

† Calling at Madeira. * Via Tenerife.

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Drummond Castle (via Madeira) ...	June 23	June 19

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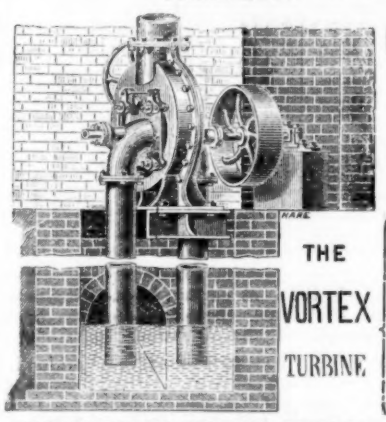

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MINING AND MILLING AT THE MESQUITAL DEL ORO GOLD MINE.

AN APPENDIX TO MR. A. C. CLAUDET'S PAPER.

WE publish the following statistics, which formed an appendix to Mr. Arthur C. Claudet's paper read recently before the Institution of Mining and Metallurgy, which figures, no doubt, will be of interest to a large section of our readers:—

ANALYSIS OF WORKING COST.

(CALCULATED ON THE EXPENDITURE OF THE THREE YEARS 1891, 1892, AND 1893.)

	Tons.
Quantity of ore extracted from headings ..	16,990
" " " stopes ..	83,292
Total extraction of ore from Mesquital Mine	100,282
Ore extracted from San Carlos Mine.. ..	400
Total quantity of ore trammed to mill ..	100,682
Quantity of ore crushed, after deducting 7 per cent. for moisture	93,986

Heads of Expenditure.	3 Years' Cost in Mexican Currency.	Cost per Ton. Mex. Cur.	Cost per Ton. Sterling.	Total Costs in Mexican Currency.	Cost per Ton. Mex. Cur.	Cost per Ton. Sterling.
Mining Cost, in detail.	$ c.	$ c.	s. d.	$ c.	$ c	s. d.
General—						
Wages, English	31,343·26	0·31	0 11½	87,431·83	0 87	2 8¼
" Native	39,150·11	0·39	1 2½			
Materials	16,938·46	0·17	0 6¼			
Headings—						
Wages, Native	45,725·79	2·69	8 3½	66,178·71	3 90	12 (¾
Materials	20,5:0·92	1·21	3 8¾			
Stoping—						
Wages, Native	122,261·14	1·47	4 6¾	171,003·83	2·05	6 3¾
Materials	48,742·69	0·58	1 9¼			
Tramming—						
Wages, Native	42,236·34	0·43	1 4	49,002·32	0·49	1 6¼
Materials	5,766·28	0·06	0 2¼			
S. Carlos Development—						
Wages, English... ...	797·87	—	—	7,782·31	—	—
" Native	5,089·07	—	—			
Materials	1,895·37	—	—			
Mining Cost, in aggregate.						
Wages, English	32,141 13	0·32	0 11¾	321,497 30	3·73	11 7¾
" Native	255,462·45	2·53	7 9¼			
Materials	93,893·72	0·93	2 10⅜			
Milling Cost.						
Wages, English	27,357·03	0·29	0 10¾	147,475·24	1·56	4 9¾
" Native	34,311·04	0·36	1 1¾			
Materials	43,139·43	0·43	1 4			
Firewood	44,667 74	0·48	1 5¾			
Administration and Mine Establishment	101,973·17	1·08	3 4	101,973·17	1·08	3 4
Bullion Charges.						
Government Royalty ..	34,314·8	0·37	1 1¾	69,347·52	0·74	2 3½
State Tax	10,089·40	0·11	0 4			
Stamp Duty	3,960·24	0·04	0 1½			
Forwarding Com. and Transport...	20.983·38	0·22	0 8¼			
Total Cost	899.298·53	7 16	22 1	899,29.·53	7 16	22 1

In the foregoing analysis the cost per ton is calculated into sterling at 37d. per $1, that being the average of the rates obtained during the three years under review.

The following table gives a concise view of the working in each of the three years separately, and, the sterling cost being first calculated at the average rate of exchange obtained in each respective year, the penultimate column shows the actual cost per ton in the year referred to; while the last column, being calculated at the average rate of the three years, forms a true comparison of the working cost at 37d. per $1, which was the average exchange for the three years under review:—

Year.	Crushing.	Produce. Fine Gold.	Value of Produce.	Cost at Mine. In Mexican Currency. Cost.	Per Ton.	In Sterling, at Average Rate of each respective Year. Rate.	Cost.	Per Ton.	Cost per Ton at average rate 37d.
	Tons.	Oz.	£	$	$ c.	d.	£	s. d.	s. d.
1891	27,584	14,085	59,702	210,029	7·79	about 41	36,777	26 7½	21 0¾
1892	31,7·8	11,247	47,350	242,529	7·62	35¾	36,141	22 8¾	23 6¾
1893	34,854	10,665	44,900	241,71·	6·97	34⅜	34,626	19 11⅜	21 6
Totals & Av'r'ge	93,988	35,997	151,.52	693,298	7·16	about 37d	107,·44	22 1	22 1

The total amount of ore crushed since the commencement of milling by the present company in 1886 to the end of 1894 is 167,164 tons, yielding in fine gold 61,572 ounces, the value being £260,175.

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Mexico—The Mexican Gold and Silver Recovery Co. (Ltd.). 2a, Calle de Providencia, No. 7, Mexico City, Mexico.
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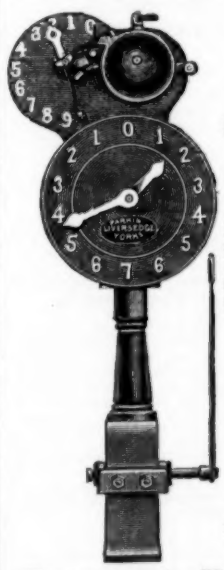
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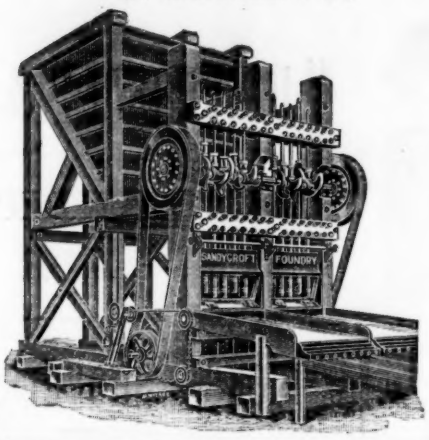

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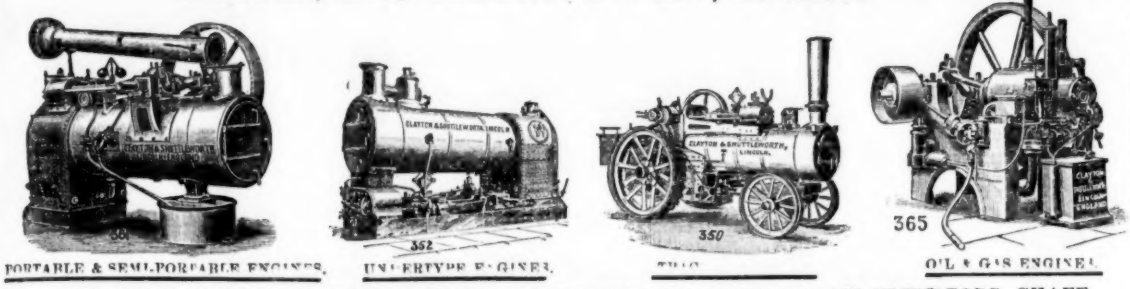

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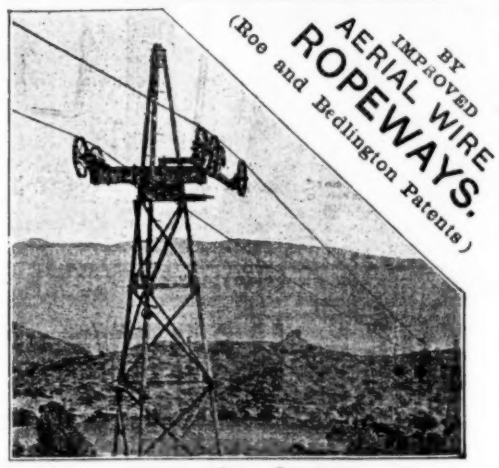

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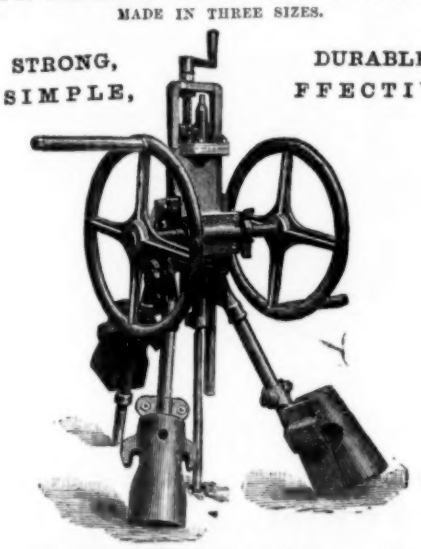

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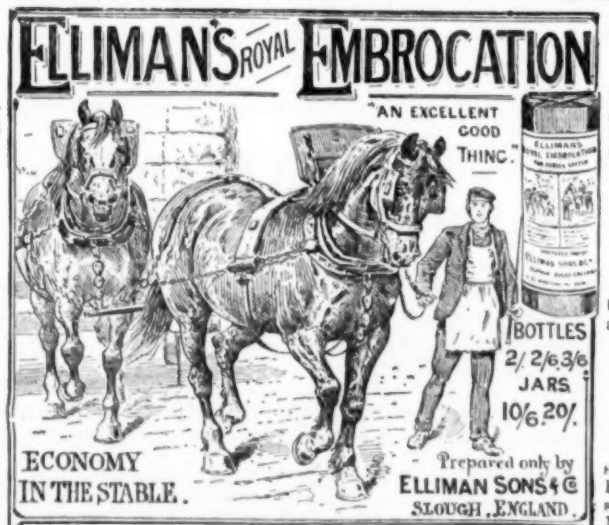

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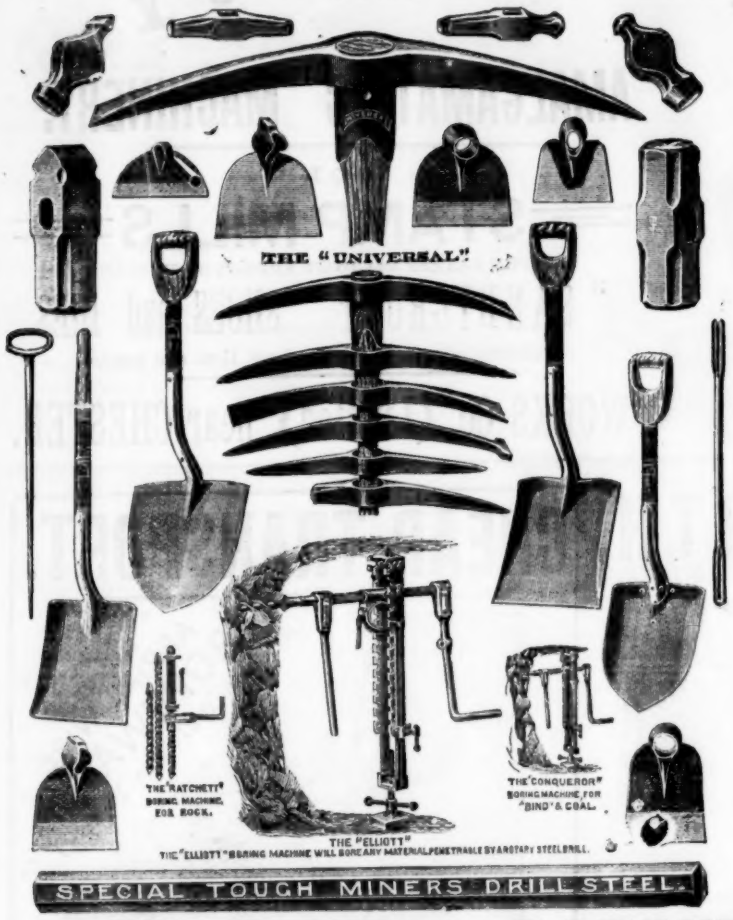
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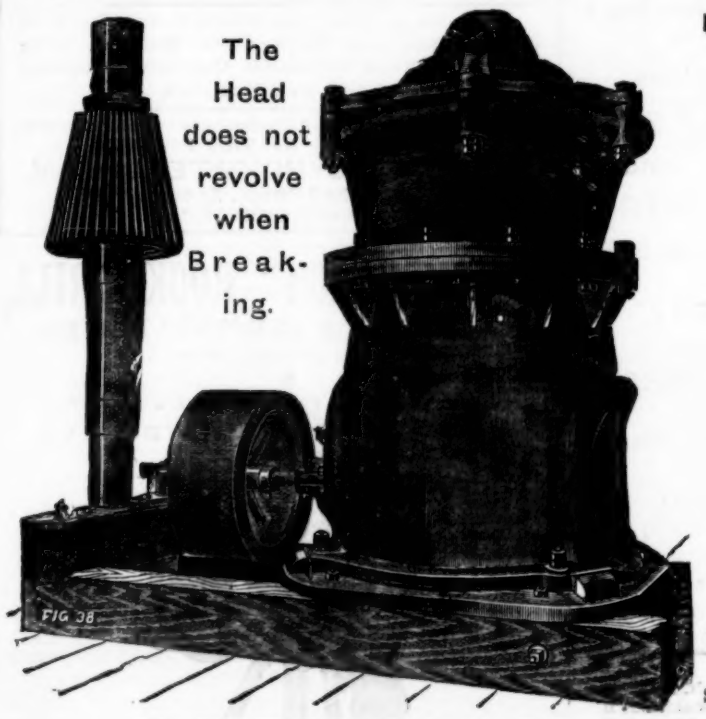

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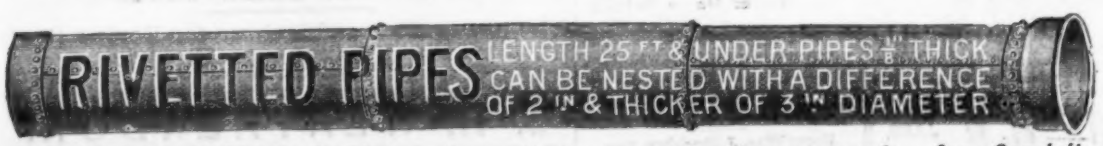

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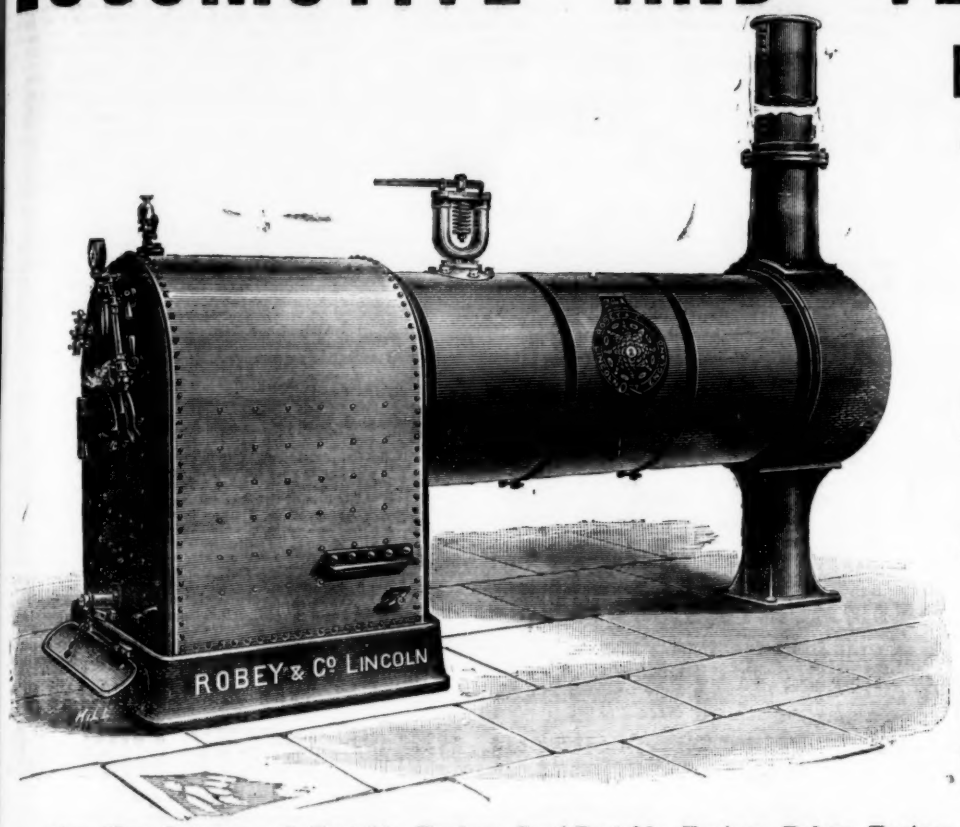

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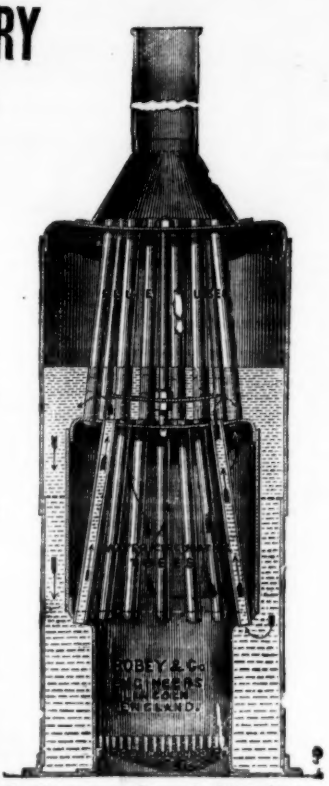

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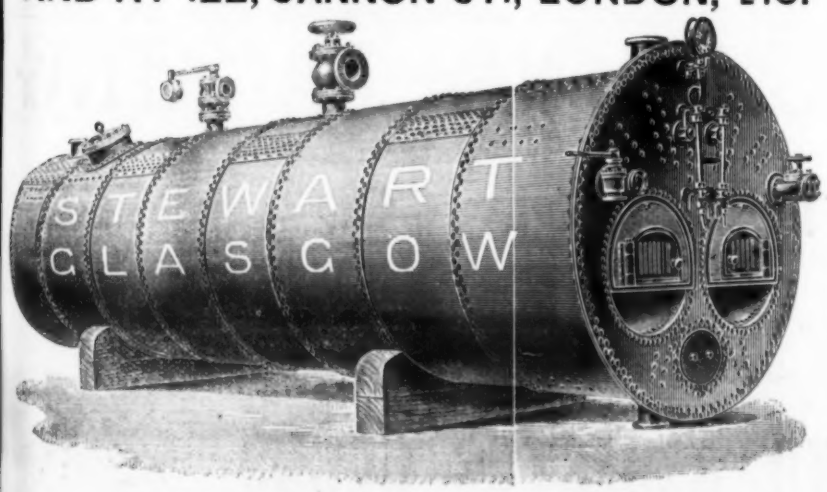

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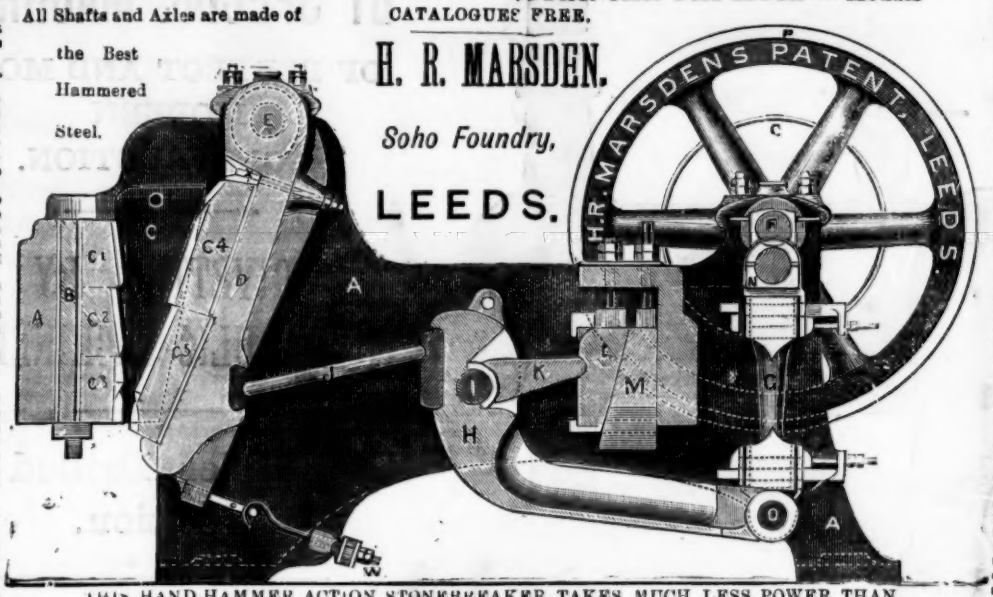

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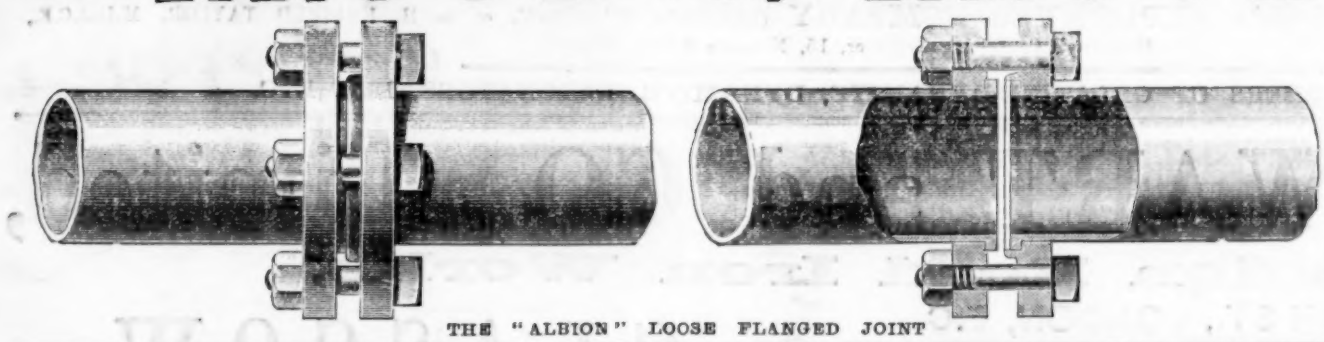

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